

AMICUS THERAPEUTICS INC

Form 10-K

March 10, 2010

Table of Contents

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2009  
Commission File Number 001-33497

Amicus Therapeutics, Inc.  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

71-0869350  
(IRS Employer  
Identification No.)

6 Cedar Brook Drive, Cranbury, NJ 08512  
(Address of principal executive offices)  
Telephone: (609) 662-2000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

Common Stock, par value \$0.01 per share

The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, non-accelerated filer or a smaller reporting company. See definition of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

**Large accelerated filer**  **Accelerated filer**  **Non-accelerated filer**  **Smaller Reporting Company**   
Indicate by check mark if the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the 7,302,481 shares of voting common equity held by non-affiliates of the registrant, computed by reference to the closing price as reported on the NASDAQ, as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2009) was approximately \$83,613,407. Shares of voting and non-voting stock held by executive officers, directors and holders of more than 10% of the outstanding stock have been excluded from this calculation because such persons or institutions may be deemed affiliates. This determination of affiliate status is not a conclusive determination for other purposes.

As of February 26, 2010, there were 22,672,421 shares of common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE:** Portions of the Proxy Statement for the registrant's 2010 Annual Meeting of Stockholders which is to be filed subsequent to the date hereof are incorporated by reference into Part III of this Annual Report on Form 10-K.

---

<u>PART I</u>	2
<u>Item 1. BUSINESS</u>	2
<u>Item 1A. RISK FACTORS</u>	22
<u>Item 1B. UNRESOLVED STAFF COMMENTS</u>	41
<u>Item 2. PROPERTIES</u>	41
<u>Item 3. LEGAL PROCEEDINGS</u>	41
<u>Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS</u>	41
<u>PART II</u>	42
<u>Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	42
<u>Item 6. SELECTED FINANCIAL DATA</u>	46
<u>Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	47
<u>Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	57
<u>Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	58
<u>Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	85
<u>Item 9A. CONTROLS AND PROCEDURES</u>	85
<u>Item 9B. OTHER INFORMATION</u>	85
<u>PART III</u>	86
<u>Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	86
<u>Item 11. EXECUTIVE COMPENSATION</u>	87
<u>Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	88
<u>Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE</u>	88

<u>Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES</u>	88
<u>PART IV</u>	89
<u>Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULE</u>	89
<u>SIGNATURES</u>	91
<u>Exhibit 23.1</u>	
<u>Exhibit 31.1</u>	
<u>Exhibit 31.2</u>	
<u>Exhibit 32.1</u>	
<u>Exhibit 32.2</u>	

---

**Table of Contents**

**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This annual report on Form 10-K contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this annual report on Form 10-K regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. The words anticipate, believe, estimate, expect, intend, may, predict, project, will, would and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

The forward-looking statements in this annual report on Form 10-K include, among other things, statements about:

- the progress and results of our clinical trials of our drug candidates, including Amigal;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the number and development requirements of other product candidates that we pursue;
- the costs of commercialization activities, including product marketing, sales and distribution;
- the emergence of competing technologies and other adverse market developments;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property related claims;
- the extent to which we acquire or invest in businesses, products and technologies;
- our ability to execute our operational and business plans and realize reductions in our expenses in line with our restructuring plan; and
- our ability to establish collaborations and obtain milestone, royalty or other payments from any such collaborators.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this annual report on Form 10-K, particularly in Part I, Item 1A Risk Factors that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, collaborations or investments we may make.

You should read this annual report on Form 10-K and the documents that we incorporate by reference in this annual report on Form 10-K completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements.

**Table of Contents**

**PART I**

**Item 1. BUSINESS.**

**Overview**

We are a biopharmaceutical company focused on the discovery, development and commercialization of orally-administered, small molecule drugs known as pharmacological chaperones. Pharmacological chaperones are a novel, first-in-class approach to treating a broad range of diseases including lysosomal storage disorders and diseases of neurodegeneration. Our goal is to become a leading biopharmaceutical company in these areas. Our current strategic priorities include the following:

- Phase 3 development of our lead product candidate, Amigal for Fabry disease;
- preclinical and clinical development of combination therapy involving pharmacological chaperones and enzyme replacement therapy; and
- preclinical evaluation of the use of pharmacological chaperones for diseases of neurodegeneration.

Our novel approach to the treatment of human genetic diseases consists of using pharmacological chaperones that selectively bind to the target protein; increasing the stability of the protein and helping it fold into the correct three-dimensional shape. This allows proper trafficking of the protein within the cell, thereby increasing protein activity, improving cellular function and potentially reducing cell stress. We have also demonstrated in preclinical studies that pharmacological chaperones can further stabilize normal, or wild-type proteins. This stabilization could lead to a higher percentage of the target proteins folding correctly and more stably, which can increase cellular levels of that target protein and improve cellular function, making chaperones potentially applicable to a wide range of diseases.

Our lead product candidate, Amigal (migalastat hydrochloride) for Fabry disease, is in Phase 3 development. Our other clinical stage product candidates are AT2220 (1-deoxynojirimycin HCl) for Pompe disease, which is currently in Phase 1 testing and remains on partial clinical hold, and Plicera (afegostat tartrate) for Gaucher disease, which we do not plan to advance into Phase 3 development at this time. We are conducting preclinical studies in diseases of neurodegeneration, including Parkinson's and Alzheimer's disease. Although Fabry, Gaucher and Pompe are relatively rare diseases, they represent substantial commercial markets due to the severity of the symptoms and the chronic nature of the diseases. The worldwide net product sales for the five currently approved therapeutics to treat Fabry, Gaucher and Pompe disease were approximately \$1.8 billion in 2009, as publicly reported by the companies that market these therapeutics.

Fabry and other lysosomal storage disorders are among certain human diseases that are caused by mutations in specific genes that, in many cases, lead to the production of proteins with reduced stability. Proteins with such mutations may not fold into their correct three-dimensional shape and are generally referred to as misfolded or unstable proteins. Misfolded or unstable proteins are often recognized by cells as having defects and, as a result, may be eliminated prior to reaching their intended location in the cell. The reduced biological activity of these proteins leads to impaired cellular function and ultimately to disease.

The current standard of treatment for Fabry, Gaucher and Pompe diseases is enzyme replacement therapy, or ERT. This type of therapy compensates for the reduced level of activity of specific enzymes through regular infusions of recombinant forms of the enzyme. Instead of adding enzymes from an external source by intravenous infusion, our approach uses orally-administered small molecule pharmacological chaperones to improve the function of the enzyme that is made by the patient's own body. We believe our product candidates may have advantages over ERT relating to bio-distribution and ease of use, potentially improving treatment of these diseases.

In addition, we have increasingly focused on the use of pharmacological chaperones in combination with ERT, which we believe may address certain key limitations of ERT. The use of pharmacological chaperones in combination with ERT may significantly enhance the safety and efficacy of ERT by, among other effects, prolonging the half-life of infused enzymes in the circulation, increasing uptake of the infused enzymes into cells and tissues, and increasing enzyme activity and substrate reduction in target tissues compared to that observed with ERT alone.

While our initial clinical efforts have focused on the use of pharmacological chaperones to treat lysosomal storage diseases, we believe that our technology may be applicable to the treatment of certain diseases of neurodegeneration. Our lead preclinical program in this area is focused on Parkinson's disease and we have established initial

proof-of-concept in animal models. Our second preclinical program in this area is focused on Alzheimer's disease. In 2010, we expect to complete advanced preclinical proof-of-concept studies in Parkinson's disease and complete initial proof-of-concept studies in Alzheimer's disease.



## **Table of Contents**

In March 2010, we sold 4.95 million shares of our common stock and warrants to purchase 1.85 million shares of common stock in a registered direct offering to a select group of institutional investors. The shares of common stock and warrants were sold in units consisting of one share of common stock and one warrant to purchase 0.375 shares of common stock at a price of \$3.74 per unit. The warrants have a term of four years and are exercisable any time on or after the six month anniversary of the date they were issued, at an exercise price of \$4.43 per share. The net proceeds of the offering are expected to be approximately \$17.1 million after deducting the placement agency fee and all other estimated offering expenses. Leerink Swann LLC served as sole placement agent for the offering.

### **Our Lead Product Candidate-Amigal for Fabry Disease**

Our first key strategic priority is to advance our lead program, Amigal for Fabry disease. We commenced a Phase 3 study of Amigal intended to support approval in the United States (Study 011) in the second quarter of 2009, and treatment of the first patient began in the fourth quarter of 2009. We expect to complete enrollment by the end of 2010 and to have preliminary results from this study in mid-2011. Study 011 is a 6-month, randomized, double-blind trial comparing Amigal to placebo in approximately 60 subjects. The surrogate primary endpoint is the change in the amount of kidney interstitial capillary GL-3. Subjects to be enrolled are Fabry patients who have never received ERT, or who have not received ERT for at least 6 months, and who have a mutation responsive to Amigal. We intend to seek Accelerated Approval for Amigal according to Subpart H regulations. The key elements of this study design and regulatory path were agreed to with the U.S. Food and Drug Administration (FDA) in the second quarter of 2009. In addition, we expect to commence a separate Phase 3 study (Study 012) during 2010 to support approval of Amigal in the European Union. Study 012 will be an 18-month, randomized, open-label study comparing Amigal to ERT in approximately 60 subjects. The primary outcome of efficacy will be renal function as measured by glomerular filtration rate (GFR).

In February 2010, we presented preliminary data from our ongoing Phase 2 extension study of Amigal, which is designed to evaluate the long-term safety and efficacy of Amigal. Among the endpoints being evaluated are two measures of renal function, estimated glomerular filtration rate (eGFR) and proteinuria. Preliminary data indicate that eGFR has remained stable out to 2-3 years for all subjects in the extension study and the average annual rate of change in eGFR in subjects identified as responders to Amigal, excluding hyperfiltrators, was +2.0 mL/min/1.73m<sup>2</sup>. Additionally, trends of reduced proteinuria continued to be observed in subjects identified as responders to Amigal. In addition, the data indicate that treatment with Amigal continues to be generally well-tolerated, with no drug-related serious adverse events. We previously reported in March 2009 that subjects identified as responders to Amigal at the completion of the Phase 2 studies continued to maintain elevated levels of the target enzyme (α-Gal A), as measured in white blood cells, and reduced levels of the target substrate (kidney GL-3), as measured in urine. A reduction of GL-3 levels was also observed in interstitial capillary cells from kidney biopsies. Nineteen subjects continue to receive treatment in the extension study.

### **Chaperone-ERT Combination Therapy**

Another of our key strategic priorities is the advancement of the preclinical and clinical development of pharmacological chaperone-ERT combination therapy. When used as a monotherapy, pharmacological chaperones are designed to selectively bind to target enzymes in patient cells, thereby increasing protein stability and allowing for increased transport to lysosomes, where the enzyme performs its natural function of degrading substrate. When used in combination with ERT, we believe that these binding and stabilization properties may improve key characteristics of the infused enzymes used in ERT, thereby increasing ERT's safety and efficacy. As previously reported, in 2009, we conducted initial preclinical studies using pharmacological chaperones in combination with ERT. At several scientific conferences, we presented data from these studies which demonstrated that the addition of a pharmacological chaperone to ERT has the potential to address key limitations of ERT, such as a lack of stability in circulation which can reduce safety and efficacy.

In February 2010, we presented new data from preclinical studies that evaluated the combination of Amigal and an ERT, and another pharmacological chaperone, AT2220 (1-deoxynojirimycin HC1) and a different ERT, in mouse models of Fabry and Pompe disease, respectively. Studies of both combinations demonstrated that co-administration of the chaperone with ERT resulted in prolonged half-life of the administered enzyme in the circulation, increased enzyme activity in cells and greater substrate reduction in target tissues compared to that seen with ERT alone.

We intend to initiate a Phase 2 study with Amigal in combination with ERT for Fabry disease before the end of 2010. Additionally, we are evaluating options to advance chaperone-ERT combination therapy programs for Pompe disease and Gaucher disease and are conducting preclinical combination studies for the treatment of these diseases.

## **Table of Contents**

### **Diseases of Neurodegeneration**

Our final key strategic priority is advancing our pharmacological chaperone technology to develop treatments for diseases of neurodegeneration. We believe the knowledge we have gained from exploring the use of pharmacological chaperones in rare genetic diseases can be applied to these non-lysosomal storage disease applications, and that our small molecule approach may be especially well-suited for treating diseases that affect the brain. For these applications, we believe pharmacological chaperones may be used to further stabilize normal, or wild-type proteins and may, therefore, increase the cellular amounts and activities of specifically chosen target proteins that may be important for the treatment of neurodegenerative diseases. In addition, recent population genetics studies have established a link between being a Gaucher carrier and developing Parkinson's disease. In particular, these studies demonstrate that Gaucher carriers have an estimated five-fold increased risk for Parkinson's disease, and that carriers tend to develop Parkinson's at an earlier age. Our lead preclinical program for Parkinson's disease is leveraging the knowledge we have gained from our Gaucher program to advance the use of pharmacological chaperones for the treatment of Parkinson's disease.

We have completed initial proof-of-concept studies in animal models of Parkinson's disease and we recently presented data from preclinical studies that evaluated the chaperone AT2101 in appropriate mouse models. These studies demonstrated that treatment with AT2101 increased the activity of  $\alpha$ -glucocerebrosidase (GCase), prevented accumulation of  $\alpha$ -synuclein in the brain and improved motor function as assessed in various behavioral tests. We also reported that we have developed new compounds that improve on the properties of AT2101 and expand the range of doses and regimens that show motor improvement in mouse models of the disease. We expect to complete advanced preclinical proof-of-concept studies in Parkinson's disease and report additional data during 2010. Additionally, we recently announced that we have initiated a second preclinical neurodegenerative disease program for Alzheimer's disease. Our work in Alzheimer's also builds on the understanding of pharmacological chaperones we have developed over the past several years and our work in Parkinson's disease. We expect to complete initial proof-of-concept studies in Alzheimer's disease and report data during 2010.

### **Our Pharmacological Chaperone Technology**

In the human body, proteins are involved in almost every aspect of cellular function. Proteins are linear strings of amino acids that fold and twist into specific three-dimensional shapes in order to function properly. Certain human diseases result from mutations that cause changes in the amino acid sequence of a protein, and these changes often reduce protein stability and may prevent them from folding properly. The majority of genetic mutations that lead to the production of less stable or misfolded proteins are called missense mutations. These mutations result in the substitution of a single amino acid for another in the protein. Because of this type of error, missense mutations often result in proteins that have a reduced level of biological activity. In addition to missense mutations, there are also other types of mutations that can result in proteins with reduced biological activity.

Proteins generally fold in a specific region of the cell known as the endoplasmic reticulum (ER). The cell has quality control mechanisms that ensure that proteins are folded into their correct three-dimensional shape before they can move from the ER to the appropriate destination in the cell, a process generally referred to as protein trafficking. Misfolded proteins are often eliminated by the quality control mechanisms after initially being retained in the ER. In certain instances, misfolded or unstable proteins can accumulate in the ER before being eliminated.

The retention of misfolded proteins in the ER interrupts their proper trafficking, and the resulting reduced biological activity can lead to impaired cellular function and ultimately to disease. In addition, the accumulation of misfolded proteins in the ER may lead to various types of stress on cells, which may also contribute to cellular dysfunction and disease.

We use pharmacological chaperones to selectively bind to a target protein and increase its stability. The binding of the chaperone molecule helps the protein fold into its correct three-dimensional shape. This allows the protein to be trafficked from the ER to the appropriate location in the cell, thereby increasing cellular amounts and protein activity, improving cellular function and potentially reducing cell stress.

Our proprietary approach to the discovery of pharmacological chaperone drug candidates involves the use of rapid molecular and cell-based screening methods combined with our understanding of the intended biological function of proteins implicated in disease. We use this knowledge to select and develop compounds with desirable properties. In

many cases, we are able to start with specific molecules and classes of compounds already known to interact with the target protein but not used previously as therapies. This can greatly reduce the time and cost of the early stages of drug discovery and development.

We believe our technology may be broadly applicable to a wide range of diseases for which protein stabilization and improved folding may be beneficial.

**Table of Contents****Potential Advantages of Pharmacological Chaperones for the Treatment of Lysosomal Storage Disorders**

To date, we have focused on developing pharmacological chaperones for the treatment of lysosomal storage disorders. Lysosomal storage disorders are a type of metabolic disorder characterized by mutations in lysosomal enzymes, which are specialized proteins that break down cellular substrates in a part of the cell called the lysosome. The current therapeutic standard of care for the most common lysosomal storage disorders is enzyme replacement therapy, which involves regular infusions of recombinant human enzyme to compensate for the deficient lysosomal enzyme. We believe that pharmacological chaperone therapy may have advantages relative to enzyme replacement therapy for the treatment of lysosomal storage disorders, including tissue distribution, ease of use and method of manufacturing. The following table compares some features of enzyme replacement therapy to pharmacological chaperone therapy.

<b>Product Characteristic</b>	<b>Enzyme Replacement Therapy</b>	<b>Pharmacological Chaperone Therapy</b>
<i>Biodistribution</i>	Variable tissue distribution	Broad tissue distribution, including brain
<i>Ease of Use</i>	Weekly or every other week intravenous infusion	Oral administration

**Manufacturing**

Recombinant protein manufacturing

Chemical synthesis

An additional therapeutic approach to the treatment of certain lysosomal storage disorders is substrate reduction therapy. We believe our pharmacological chaperone therapies may have advantages relative to substrate reduction therapy as well. Like pharmacological chaperone therapies, substrate reduction therapy uses orally-administered small molecules; however, the underlying mechanism of action is very different. Substrate reduction therapies are designed to prevent the production of the substrate that accumulates in disease by inhibiting an enzyme required to make the substrate in cells, which is not the same enzyme that is deficient in the disease. Importantly, if synthesis of the substrate is inhibited it cannot perform its normal biological functions. Additionally, the enzyme that is inhibited is needed to make other molecules that are used in other biological processes. As a result, inhibiting this enzyme may have adverse effects that are difficult to predict. By contrast, our pharmacological chaperones are designed to bind directly to the enzyme deficient in the disease, increasing its stability and helping it fold into its correct three-dimensional shape. This in turn enables proper trafficking to the lysosome where the enzyme can directly decrease substrate accumulation.

To date, one substrate reduction therapy product has received regulatory approval in the U.S. and the European Union (EU) for the treatment of one lysosomal storage disorder. Zavesca<sup>®</sup>, a substrate reduction therapy product commercialized by Actelion, Ltd., is approved for the treatment of Gaucher disease in the U.S., the EU and other countries. Genzyme Corporation is currently developing a substrate reduction therapy product which is in Phase 3.

**Amigal for Fabry Disease****Overview**

Our most advanced product candidate, Amigal, is an orally-administered, small molecule pharmacological chaperone for the treatment of Fabry disease. Amigal is currently in Phase 3 development.

We completed four Phase 2 clinical trials of Amigal in 2007. The primary objective of the Phase 2 trials was to evaluate the safety and tolerability of treatment with Amigal. The secondary objective was to evaluate certain pharmacodynamic measures of treatment, including effects on  $\alpha$ -GAL (the target enzyme deficient in Fabry patients) and levels of GL-3 (the substrate that builds up in the cells of patients) in cells and tissues affected by the disease. An additional objective was the preliminary assessment of cardiac and renal function. The four open-label, multi-national Phase 2 trials of Amigal enrolled 18 men and 9 women with Fabry disease between the ages of 17 and 65. The four studies examined various dose levels and frequencies of Amigal administration and had 12 or 24 week primary treatment arms with an optional treatment extension.

Twenty-six patients completed the primary treatment arms and all entered the optional treatment extension. The 26 patients had 21 different missense genetic mutations that cause Fabry disease. The mutations represented the full

spectrum of Fabry patients, including those with both early-onset and late-onset forms of the disease.

## **Table of Contents**

The key findings in the Phase 2 studies were:

Amigal was generally safe and well-tolerated at all doses evaluated and no drug-related serious adverse events were reported.

Amigal increased the level of the enzyme deficient in Fabry patients in 24 of 26 study subjects.

Amigal was shown to reduce the accumulated substrate in a majority of study subjects.

Renal and cardiac function results were encouraging, including those seen in patients treated for nearly two years.

Responses in patients with different Fabry mutations were consistent with the results of in vitro testing, thus confirming the ability to use pharmacogenetics to select likely responders for future studies.

We commenced a Phase 3 study of Amigal intended to support approval in the United States (Study 011) in the second quarter of 2009, and treatment of the first patient began in the fourth quarter of 2009. We expect to complete enrollment by the end of 2010 and to have preliminary results from this study in mid-2011. Study 011 is a 6-month, randomized, double-blind trial comparing Amigal to placebo in approximately 60 subjects. As agreed upon with the FDA in the second quarter of 2009, the surrogate primary endpoint is the change in the amount of kidney interstitial capillary GL-3. Subjects to be enrolled are Fabry patients who have never received ERT, or who have not received ERT for at least 6 months, and who have a mutation responsive to Amigal. We intend to seek Accelerated Approval for Amigal according to Subpart H regulations.

In addition, we expect to commence a separate Phase 3 study (Study 012) during 2010 to support approval of Amigal in the EU. Study 012 will be an 18-month, randomized, open-label study comparing Amigal to ERT in approximately 60 subjects. The primary outcome of efficacy will be renal function as measured by glomerular filtration rate (GFR).

In February 2010, we presented preliminary data from our ongoing Phase 2 extension study of Amigal, which is designed to evaluate the long-term safety and efficacy of Amigal. Among the endpoints being evaluated are two measures of renal function, estimated glomerular filtration rate (eGFR) and proteinuria. Preliminary data indicate that eGFR has remained stable out to 2-3 years for all subjects in the extension study and the average annual rate of change in eGFR in subjects identified as responders to Amigal, excluding hyperfiltrators, was +2.0 mL/min/1.73m<sup>2</sup>.

Additionally, trends of reduced proteinuria continued to be observed in subjects identified as responders to Amigal. In addition, the data indicate that treatment with Amigal continues to be generally well-tolerated, with no drug-related serious adverse events. We previously reported in March 2009 that subjects identified as responders to Amigal at the completion of the Phase 2 studies continued to maintain elevated levels of the target enzyme (α-Gal A), as measured in white blood cells, and reduced levels of the target substrate (kidney GL-3), as measured in urine. A reduction of GL-3 levels was also observed in interstitial capillary cells from kidney biopsies. Nineteen subjects continue to receive treatment in the extension study.

In February 2004, the FDA granted orphan drug designation to Amigal for the treatment of Fabry disease and in March 2006, the EMEA recommended orphan medicinal product designation for Amigal.

### ***Causes of Fabry Disease and Rationale for Use of Amigal***

Fabry disease is a lysosomal storage disorder resulting from a deficiency in α-GAL. Symptoms can be severe and debilitating, including kidney failure and increased risk of heart attack and stroke. The deficiency of α-Gal A in Fabry patients is caused by inherited genetic mutations. Certain of these mutations cause changes in the amino acid sequence of α-Gal A that may result in the production of α-Gal A with reduced stability that does not fold into its correct three-dimensional shape. Although α-Gal A produced in patient cells often retains the potential for some level of biological activity, the cell's quality control mechanisms recognize and retain misfolded α-Gal A in the ER, until it is ultimately moved to another part of the cell for degradation and elimination. Consequently, little or no α-Gal A moves to the lysosome, where it normally breaks down GL-3. This leads to accumulation of GL-3 in cells, which is believed to be the cause of the symptoms of Fabry disease. In addition, accumulation of the misfolded α-Gal A enzyme in the ER may lead to stress on cells and inflammatory-like responses, which may contribute to cellular dysfunction and disease.

Amigal is designed to act as a pharmacological chaperone for α-Gal A by selectively binding to the enzyme, which increases its stability and helps the enzyme fold into its correct three-dimensional shape. This stabilization of α-Gal A allows the cell's quality control mechanisms to recognize the enzyme as properly folded so that trafficking of the

enzyme to the lysosome is increased, enabling it to carry out its intended biological function, the metabolism of GL-3. As a result of restoring the proper trafficking of  $\beta$ -Gal A from the ER to the lysosome, Amigal also reduces the accumulation of misfolded protein in the ER, which may alleviate stress on cells and some inflammatory-like responses that may be contributing factors in Fabry disease.

Because Amigal increases levels of a patient's naturally produced  $\beta$ -GAL, those Fabry disease patients with a missense mutation or other genetic mutations that result in production of  $\beta$ -Gal A that is less stable but with some residual enzyme activity are the ones most likely to respond to treatment with Amigal. We estimate that the majority of patients with Fabry disease may respond to pharmacological chaperone therapy. Patients with genetic mutations leading to a partially made  $\beta$ -Gal A enzyme or  $\beta$ -Gal A enzyme with an irreversible loss of activity are less likely to respond to treatment with Amigal.



## **Table of Contents**

### ***Fabry Disease Background***

The clinical manifestations of Fabry disease span a broad spectrum of severity and roughly correlate with a patient's residual  $\alpha$ -Gal A levels. The majority of currently treated patients are referred to as classic Fabry disease patients, most of whom are males. These patients experience disease of various organs, including the kidneys, heart and brain, with disease symptoms first appearing in adolescence and typically progressing in severity until death in the fourth or fifth decade of life. A number of recent studies suggest that there are a large number of undiagnosed males and females that have a range of Fabry disease symptoms, such as impaired cardiac or renal function and strokes, that usually first appear in adulthood.

Individuals with this type of Fabry disease, referred to as later-onset Fabry disease, tend to have higher residual  $\alpha$ -Gal A levels than classic Fabry disease patients. Although the symptoms of Fabry disease span a spectrum of severity, it is useful to classify patients as having classic or later-onset Fabry disease when discussing the disease and the associated treatable population.

### ***Classic Fabry Disease***

Individuals with classic Fabry disease are in most instances males. They have little or no detectable  $\alpha$ -Gal A levels and are the most severely affected. These patients first experience disease symptoms in adolescence, including pain and tingling in the extremities, skin lesions, a decreased ability to sweat and clouded eye lenses. If these patients are not treated, their life expectancy is reduced and death usually occurs in the fourth or fifth decade of life from renal failure, cardiac dysfunction or stroke. Studies reported in the Journal of the American Medical Association (January 1999) and The Metabolic and Molecular Bases of Inherited Disease (8th edition 2001) suggest the annual incidence of Fabry disease in newborn males is 1:40,000-1:60,000. Current estimates from the University of Iowa and the National Kidney Foundation suggest that there are a total of approximately 5,000 classic Fabry disease patients worldwide.

### ***Later-onset Fabry Disease***

Individuals with later-onset Fabry disease can be male or female. They typically first experience disease symptoms in adulthood, and often have disease symptoms focused on a single organ. For example, many males and females with later-onset Fabry disease have enlargement of the left ventricle of the heart. As the patients advance in age, the cardiac complications of the disease progress and can lead to death. Studies reported in Circulation and Journal of the American Heart Association (March 2002 and August 2004), estimated that 6-12% of patients between 40 and 60 years of age with an unexplained enlargement of the left ventricle of the heart, a condition referred to as left ventricular hypertrophy, have Fabry disease.

A number of males and females also have later-onset Fabry disease with disease symptoms focused on the kidney that progress to end stage renal failure and eventually death. Studies reported in Nephrology Dialysis Transplant (2003), Clinical and Experimental Nephrology (2005) and Nephrology Clinical Practice (2005) estimate that 0.20% to 0.94% of patients on dialysis have Fabry disease.

In addition, later-onset Fabry disease may also present in the form of strokes of unknown cause. A recent study reported in The Lancet (November 2005) found that approximately 4% of 721 male and female patients in Germany between the ages of 18 to 55 with stroke of unknown cause have Fabry disease.

It was previously believed to be rare for female Fabry disease patients to develop overt clinical manifestations of Fabry disease. Fabry disease is known as an X-linked disease because the inherited  $\alpha$ -Gal A gene mutation is located only on the X chromosome. Females inherit an X chromosome from each parent and therefore can inherit a Fabry mutation from either parent. By contrast, males inherit an X chromosome (and potentially a Fabry mutation) only from their mothers. For this reason, there are expected to be roughly twice as many females as males that have Fabry disease mutations. Several studies reported in the Journal of Medical Genetics (2001), the Internal Medicine Journal (2002) and the Journal of Inherited Metabolic Disease (2001) report that, while the majority of females with Fabry disease mutations have mild symptoms, many have severe symptoms, including enlargement of the left ventricle of the heart and/or renal failure.

In a recent study reported in the American Journal of Human Genetics, more than thirty-seven thousand newborn males in Italy were screened for  $\alpha$ -Gal A activity and mutations. The incidence of Fabry mutations in this study was 1:3,100, over ten times higher than previous estimates. This high incidence was attributed to a large number of newborn males with  $\alpha$ -Gal A mutations often associated with later-onset Fabry disease, which may not have been

identified in previous screening studies that relied on diagnosis based on development of symptoms of classic Fabry disease.

**Table of Contents**

***Fabry Disease Market Opportunity***

Fabry disease is a relatively rare disorder. The current estimates of approximately 5,000 patients worldwide are generally based on a small number of studies in single ethnic populations in which people were screened for classic Fabry disease. The results of these studies were subsequently extrapolated to the broader world population assuming similar prevalence rates across populations. We believe these previously reported studies did not account for the prevalence of later-onset Fabry disease and, as described above, a number of recent studies suggest that the prevalence of Fabry disease could be many times higher than previously reported.

We expect that as awareness of later-onset Fabry disease grows, the number of patients diagnosed with the disease will increase. Increased awareness of all forms of Fabry disease, particularly for specialists not accustomed to treating Fabry disease patients, may lead to increased testing and diagnosis of patients with the disease. We intend to develop and launch educational and awareness campaigns targeting cardiologists, nephrologists and neurologists regarding Fabry disease and its diagnosis. Assuming we receive regulatory approval, we expect these educational and awareness campaigns would continue as a part of the marketing of Amigal.

Based on published data from the Human Gene Mutation Database and our experience in the field, we believe the majority of the known genetic mutations that cause Fabry disease are missense mutations. There are few widely-occurring genetic mutations reported for Fabry disease, suggesting that the frequency of a specific genetic mutation reported in the Human Gene Mutation Database reflects the approximate frequency of that mutation in the general Fabry patient population. In addition, data presented at the 11th International Conference on Health Problems Related to the Chinese (2002) suggest that the vast majority of newly diagnosed patients with later-onset Fabry disease also have missense mutations. Because missense mutations often result in less stable, misfolded  $\alpha$ -Gal A with some residual enzyme activity, we believe patients with these mutations may benefit from treatment with Amigal. We also believe that other types of genetic mutations may result in misfolded  $\alpha$ -Gal A and therefore may respond to treatment with Amigal. Based on this, we believe that a majority of the Fabry disease patient population may benefit from treatment with Amigal.

***Existing Products for the Treatment of Fabry Disease and Potential Advantages of Amigal***

The current standard of treatment for Fabry disease is enzyme replacement therapy. Currently, two products are approved for the treatment of Fabry disease: Fabrazyme<sup>®</sup> and Replagal<sup>®</sup>. Fabrazyme<sup>®</sup> is approved globally and commercialized by Genzyme Corporation. Fabrazyme<sup>®</sup> was approved in the U.S. in 2003 and in the EU in 2001, and has orphan drug exclusivity in the U.S. until 2010 and in the EU until 2011. Replagal<sup>®</sup> is commercialized by Shire and approved in the EU and other countries but not in the U.S., although Shire recently announced it will be submitting a biologics license application with the FDA on a rolling basis under fast track designation in 2010. Replagal<sup>®</sup> was approved in the EU in August 2001 and has orphan drug exclusivity in the EU until 2011. The net product sales of Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> for 2009 were approximately \$431 million as publicly reported by Genzyme Corporation and \$194 million as publicly reported by Shire, respectively.

Prior to the availability of enzyme replacement therapy, treatments for Fabry disease were directed at ameliorating symptoms without treating the underlying disease. Some of these treatments include opiates, anticonvulsants, antipsychotics and antidepressants to control pain and other symptoms, and beta-blockers, calcium channel blockers, ACE inhibitors, angiotensin receptor antagonists and other agents to treat blood pressure and vascular disease. For Fabry disease patients who respond to Amigal, we believe that the use of Amigal may have advantages relative to the use of Fabrazyme<sup>®</sup> and Replagal<sup>®</sup>. Published data for patients treated with Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> for periods of up to five years demonstrate that these drugs can lead to the reduction of GL-3 in multiple cell types in the skin, heart and kidney. However, because they are large protein molecules, Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> are believed to have difficulty penetrating some tissues and cell types. In particular, it is widely believed that Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> are unable to cross the blood-brain barrier and thus are unlikely to address the neurological symptoms of Fabry disease. As a small molecule therapy that has demonstrated high oral bioavailability and good biodistribution properties in preclinical testing, Amigal has the potential to reach cells of all the target tissues of Fabry disease. Furthermore, treatment with Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> requires intravenous infusions every other week, frequently on-site at health care facilities, presenting an inconvenience to Fabry patients. Oral treatment with Amigal may be much more convenient for patients and may not have the safety risks associated with intravenous infusions.

In February 2004, Amigal was granted orphan drug designation by the FDA for the treatment of Fabry disease and in March 2006 the EMEA recommended orphan medicinal product designation for Amigal. We believe that orphan drug designation of Fabrazyme® in the U.S. and of Fabrazyme® and Replagal® in the EU will not prevent us from obtaining marketing approval of Amigal in either geography. See Government Regulation.

**Chaperone-ERT Combination Therapy**

We are currently conducting preclinical studies on the use of pharmacological chaperones in combination with ERT. Pharmacological chaperones are designed to selectively bind to target enzymes in patient cells, thereby increasing protein stability and allowing for increased transport to lysosomes and degradation of substrate by the enzyme. When used in combination with ERT, we believe that these binding and stabilization properties may improve key characteristics of the infused enzymes used in ERT by allowing for increased transport of enzymes to the lysosomes and degradation of substrate, thereby increasing ERT's safety and efficacy. As previously reported, in 2009, we conducted initial preclinical studies using pharmacological chaperones in combination with ERT. At several scientific conferences, we presented data from these studies which demonstrated that the addition of a pharmacological chaperone to ERT has the potential to address key limitations of ERT, such as a lack of stability in circulation which can reduce safety and efficacy.

## **Table of Contents**

In February 2010, we presented new data from preclinical studies that evaluated the combination of Amigal and an ERT, and another pharmacological chaperone, AT2220 (1-deoxynojirimycin HC1) and a different ERT, in mouse models of Fabry and Pompe disease, respectively. Studies of both combinations demonstrated that co-administration of the chaperone with ERT resulted in prolonged half-life of the administered enzyme in the circulation, increased enzyme activity in cells and greater substrate reduction in target tissues compared to that seen with ERT alone. We intend to initiate a Phase 2 study with Amigal in combination with ERT for Fabry disease before the end of 2010. Additionally, we are evaluating options to advance chaperone-ERT combination therapy programs for Pompe disease and Gaucher disease and are conducting preclinical combination studies for the treatment of these diseases.

### **Diseases of Neurodegeneration**

We are also conducting preclinical studies on the use of our pharmacological chaperone technology to treat diseases of neurodegeneration. We believe the knowledge we have gained from exploring the use of pharmacological chaperones in rare genetic diseases can be applied to these non-lysosomal storage disease applications, and that our small molecule approach may be especially well-suited for treating diseases that affect the brain. For these applications, we believe pharmacological chaperones may be used to further stabilize normal or wild-type proteins and may therefore increase the cellular amounts and activities of specifically chosen target proteins that may be important for the treatment of neurodegenerative diseases. In addition, recent population genetics studies have established a link between being a Gaucher carrier and developing Parkinson's disease. In particular, these studies demonstrate that Gaucher carriers have an estimated five-fold increased risk for Parkinson's disease, and that carriers tend to develop Parkinson's at an earlier age. Our lead preclinical program for Parkinson's disease is leveraging the knowledge we have gained from our Gaucher program to advance the use of pharmacological chaperones for the treatment of Parkinson's disease.

We have completed initial proof-of-concept studies in animal models of Parkinson's disease and we recently presented data from preclinical studies that evaluated the chaperone AT2101 in appropriate mouse models. These studies, funded in part by a grant from the Michael J. Fox Foundation, demonstrated that treatment with AT2101 increased the activity of  $\alpha$ -glucocerebrosidase (GCase), prevented accumulation of  $\alpha$ -synuclein in the brain and improved motor function as assessed in various behavioral tests. We also reported that we have developed new compounds that improve on the properties of AT2101 and expand the range of doses and regimens that show motor improvement in mouse models of the disease. We expect to complete advanced preclinical proof-of-concept studies in Parkinson's disease and report additional data during 2010. Additionally, we recently announced that we have initiated a second preclinical neurodegenerative disease program for Alzheimer's disease. Our work in Alzheimer's also builds on the understanding of pharmacological chaperones we have developed over the past several years and our work in Parkinson's disease. We expect to complete initial proof-of-concept studies in Alzheimer's disease and report data during 2010.

### **Parkinson's Disease Background**

Parkinson's disease is a chronic, degenerative neurological disorder of the central nervous system that results from the loss of cells in various parts of the brain, including a region called the substantia nigra. The substantia nigra cells produce dopamine, a chemical messenger responsible for transmitting signals within the brain that allow for coordination of movement. Loss of dopamine causes neurons to fire without normal control, leaving patients less able to direct or control their movement. The key signs of Parkinson's disease are resting tremor, slowness of movement (bradykinesia), postural instability (balance problems) and rigidity. Other symptoms include stiff facial expression, shuffling walk, muffled speech and depression.

Parkinson's disease affects both men and women in almost equal numbers and shows no social, ethnic, economic or geographic boundaries. While the condition usually develops after the age of 65, 15% of those diagnosed are under 50. It is estimated that approximately 1 million people in the United States suffer from Parkinson's disease.

### **Alzheimer's Disease Background**

Alzheimer's disease is an irreversible, progressive and fatal brain disease that slowly destroys memory and thinking skills, and eventually the ability to perform even simple tasks. It is the most common form of dementia. Although the cause of Alzheimer's disease is unknown, two abnormal structures in the brain called plaques and tangles are believed to play a significant role in the manifestation of the disease. Tangles, which are twisted fibers of the protein tau, begin

to develop deep in the brain, in an area called the entorhinal cortex, and plaques, which contain deposits of a protein fragment called beta-amyloid, form in other areas. As more and more plaques and tangles form in particular brain areas, healthy neurons begin to work less efficiently, lose their ability to function and communicate with each other, and eventually die. As the death of neurons increases, affected brain regions begin to shrink. By the final stage of Alzheimer's, damage is widespread and brain tissue has shrunk significantly.

## **Table of Contents**

In most people, Alzheimer's symptoms first appear after age 60. It is estimated that approximately 5.1 million people in the United States suffer from Alzheimer's disease.

### **Other Product Candidates**

In addition to Amigal, we have two product candidates in clinical development, AT2220 (1-deoxynojirimycin HCl) for Pompe disease and Plicera (afegostat tartrate) for Gaucher disease. Like Amigal, these product candidates are orally-administered, small molecule, pharmacological chaperones.

#### ***AT2220 for Pompe Disease***

As previously reported, we suspended enrollment for the Phase 2 clinical trial of our investigational drug AT2220 in adults with Pompe disease and received notice from the FDA that the AT2220 Investigational New Drug application (IND) was placed on clinical hold. The suspension occurred after two patients enrolled in the trial experienced self-reported adverse events and subsequently withdrew from the trial. The events were categorized by the site investigator as serious and probably related to treatment with AT2220.

In the third quarter of 2009, we announced plans to initiate a Phase 1 study of AT2220 after the FDA agreed to our proposal for the study and subsequently converted the clinical hold of AT2220 to a partial hold. The primary objective of this study is to evaluate the pharmacokinetics of AT2220 in muscle tissue in healthy adult subjects. This open label, single dose Phase 1 study was initiated in early October 2009 and we expect to announce results from the trial in the first half of 2010.

#### ***Plicera for Gaucher Disease***

In the fourth quarter of 2009, we reported preliminary results from our Phase 2 randomized, open-label study to assess the safety, tolerability and preliminary efficacy of Plicera in treatment-naïve adult patients with type 1 Gaucher disease. Two dose regimens of Plicera (225 mg three days on/four days off and seven days on/seven days off) were studied during this six-month trial. While all patients enrolled experienced an increase in the level of the target enzyme (GCCase) as measured in white blood cells, clinically meaningful improvements in key measures of disease were observed in just one of the eighteen patients who completed the study. The preliminary results suggest that treatment with Plicera was generally well tolerated, with no serious adverse events reported. Nineteen subjects were enrolled and 18 subjects completed the study. One subject discontinued treatment because of an adverse event (conjunctivitis-related symptoms). While a small number of patients continue in an extension to the Phase 2 study, and we continue to analyze and evaluate the results of this study, we do not plan to advance Plicera into Phase 3 development at this time.

We are, however, encouraged by the results of preclinical studies designed to evaluate the use of both AT2220 and Plicera in combination with enzyme replacement therapy. We expect to report additional data from these studies at scientific conferences in 2010.

The FDA previously granted orphan drug designation for the active ingredient in Plicera for the treatment of Gaucher disease in the United States as well as for the active ingredient in AT2220.

#### ***Pompe and Gaucher Disease Background***

Like Fabry disease, Pompe and Gaucher disease are lysosomal storage disorders resulting from a deficiency in an enzyme,  $\alpha$ -glucosidase (GAA) for Pompe and GCCase for Gaucher. Signs and symptoms of both diseases can be severe and debilitating. For Pompe, they include progressive muscle weakness throughout the body, particularly the heart and skeletal muscles; while patients suffering from Gaucher may experience an enlarged liver and spleen, abnormally low levels of red blood cells and platelets, and skeletal complications. In some forms of Gaucher disease, there is also significant impairment of the central nervous system. The enzyme deficiencies in Pompe and Gaucher patients are caused by inherited genetic mutations. Certain of these mutations cause changes in the amino acid sequence of the enzyme that may result in the production of an enzyme with reduced stability that does not fold into its correct three-dimensional shape. Although the enzymes produced in patient cells often retain the potential for some level of biological activity, the cell's quality control mechanisms recognize and retain the misfolded enzyme in the ER until it is ultimately moved to another part of the cell for degradation and elimination. Consequently, little or no GAA in Pompe patients or GCCase in Gaucher patients moves to the lysosome, where it normally breaks down its substrate, a complex lipid called glycogen in Pompe patients and glucocerebroside in Gaucher patients. This leads to accumulation of glycogen or glucocerebroside in cells, which is believed to result in the clinical manifestations of

Pompe and Gaucher disease, respectively. In addition, the accumulation of the misfolded enzyme in the ER may lead to cellular stress and inflammatory-like responses, which may contribute to cellular dysfunction and disease.



## **Table of Contents**

### **Strategic Alliances and Arrangements**

We intend to form strategic alliances to gain access to the financial, technical, clinical and commercial resources necessary to develop and market pharmacological chaperone therapeutics. We expect these alliances to provide us with financial support in the form of equity investments, research and development funding, license fees, milestone payments and royalties or profit-sharing based on sales of pharmacological chaperone therapeutics. We are exploring potential collaborations, alliances and other business development opportunities on a regular basis. We do not currently have any strategic alliances.

In November 2007, the Company entered into a License and Collaboration Agreement with Shire Pharmaceuticals Ireland Ltd. (Shire). Under the agreement, the Company and Shire were jointly developing Amigal, Plicera and AT2220 for the treatment of lysosomal storage disorders. We were also sharing the costs of developing these product candidates. In October 2009, we agreed with Shire to mutually terminate the agreement. As a result of this termination, we reacquired all global development and commercialization rights from Shire for these drug candidates, and received a \$5.2 million payment from Shire as full and final payment for amounts due to the Company under the collaboration.

### **Intellectual Property**

#### ***Patents and Trade Secrets***

Our success depends in part on our ability to maintain proprietary protection surrounding our product candidates, technology and know-how, to operate without infringing the proprietary rights of others, and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by filing U.S. and foreign patent applications related to our proprietary technology, including both new inventions and improvements of existing technology, that are important to the development of our business, unless this proprietary position would be better protected using trade secrets. Our patent strategy includes obtaining patent protection, where possible, on compositions of matter, methods of manufacture, methods of use, combination therapies, dosing and administration regimens, formulations, therapeutic monitoring, screening methods and assays. We also rely on trade secrets, know-how, continuing technological innovation, in-licensing and partnership opportunities to develop and maintain our proprietary position. Lastly, we monitor third parties for activities that may infringe our proprietary rights, as well as the progression of third party patent applications that may have the potential to create blocks to our products or otherwise interfere with the development of our business. We are aware, for example, of U.S. patents, and corresponding international counterparts, owned by third parties that contain claims related to treating protein misfolding. If any of these patents were to be asserted against us we do not believe that our proposed products would be found to infringe any valid claim of these patents. There is no assurance that a court would find in our favor or that, if we choose or are required to seek a license, a license to any of these patents would be available to us on acceptable terms or at all.

We own or license rights to several issued patents in the U.S., current member states of the European Patent Convention and numerous pending foreign applications, which are foreign counterparts of many of our U.S. patents. We also own or license rights to several pending U.S. applications. Our patent portfolio includes patents and patent applications with claims relating to methods of increasing deficient enzyme activity to treat genetic diseases. The patent positions for Amigal (migalastat HCl), our most advanced product candidate for Fabry disease, pharmacological chaperone and ERT combination therapy, diseases of neurodegeneration, Plicera (afegostat tartrate) for Gaucher disease and AT2220 (1-deoxynojirimycin HCl) for Pompe disease are described below and include both patents and patent applications we own or exclusively license:

We have an exclusive license to six issued U.S. patents and two pending U.S. applications that cover use of Amigal to treat Fabry disease, as well as a corresponding European patent and pending applications in Japan and Canada. These exclusively licensed U.S. patents relating to Amigal expire in 2018 (not including the Hatch-Waxman statutory extension, which is described below), while the European patent and foreign counterpart patents applications in Japan and Canada, if granted, will expire in 2019 (not including the Supplemental Protection Certificates or SPC extensions, which are described below). The patents and the pending applications include claims covering methods of

increasing the activity of and preventing the degradation of  $\alpha$ -GAL, and methods for the treatment of Fabry disease using Amigal. In addition, we own pending U.S. applications directed to specific treatment and monitoring regimens with Amigal as well as to dosing regimens with Amigal, which, if granted, may result in patents that expire in 2028. Further, we have a pending U.S. application directed to synthetic steps related to the commercial process for preparing Amigal, which may result in patents that expire in 2026. Lastly, we jointly own one pending U.S. application and another pending international stage application covering methods of diagnosing Fabry disease and determining whether Fabry patients will respond to treatment with Amigal, which, if granted, will expire in 2027 and 2029, respectively. We have filed, or plan to file U.S. and foreign counterparts of these applications, where appropriate, by the applicable deadlines.

**Table of Contents**

We have an exclusive license to pending patent applications covering the combination use of Amigal plus ERT (recombinant  $\alpha$ -galactosidase A), Plicera plus ERT (recombinant glucocerebrosidase) and AT2220 plus ERT (recombinant acid  $\alpha$ -glucosidase). These applications are pending in the U.S., Europe, Canada, Brazil, China, Israel, India, Japan and Mexico. If patents issue from these applications, expiration will be in 2024.

We own several US and foreign pending patent applications which cover the use of pharmacological chaperones to treat diseases of neurodegeneration. In particular we own three patent applications that cover the use of isofagomine and its derivatives to treat Parkinson's disease and one patent application covering novel compounds for the treatment of Parkinson's disease. Further, we own two patent applications that cover the use of pharmacological chaperones to treat Alzheimer's disease. If patents issue from these applications expiration dates range from 2026 to 2030.

We have an exclusive license to several U.S. patents and one pending U.S. application covering the use of Plicera to treat Gaucher disease. These patents expire in 2018 (not including the Hatch-Waxman statutory extension, which is described below). We also have an exclusive license to two U.S. patents claiming isofagomine, the active chemical moiety in Plicera, which expire in 2015 and 2016 (not including the Hatch-Waxman statutory extension, which is described below); and corresponding patents in the UK, France, Sweden, Germany, Switzerland and Japan all of which expire in 2015 (not including the SPC extensions, which are described below). We own a U.S. patent and its corresponding foreign applications covering isofagomine tartrate, which is the specific salt form or the active pharmaceutical ingredient in Plicera, which expires in 2027. We own several other pending U.S. applications directed to the synthesis of Plicera, dosing regimens of Plicera as well as specific treatment and monitoring regimens with Plicera which, if granted, will expire in 2028. We have filed, or plan to file, foreign counterparts of these applications, where appropriate, by the applicable deadlines.

We have an exclusive license to several U.S. patents and one application that covers the use of AT2220 to treat Pompe disease. These U.S. patents and pending application, if granted, will expire in 2018 (not including the Hatch-Waxman statutory extension, which is described below). We own a U.S. patent application that covers dosing regimens of AT2220 to treat Pompe disease. We have filed, or plan to file, foreign counterparts of these applications, where appropriate, by the applicable deadlines.

Individual patents extend for varying periods depending on the effective date of filing of the patent application or the date of patent issuance, and the legal term of the patents in the countries in which they are obtained. Generally, patents issued in the U.S. are effective for:

- the longer of 17 years from the issue date or 20 years from the earliest effective filing date, if the patent application was filed prior to June 8, 1995; and
- 20 years from the earliest effective filing date, if the patent application was filed on or after June 8, 1995.

The term of foreign patents varies in accordance with provisions of applicable local law, but typically is 20 years from the earliest effective filing date.

The U.S. Drug Price Competition and Patent Term Restoration Act of 1984, more commonly known as the Hatch-Waxman Act, provides for an extension of one patent, known as a Hatch-Waxman statutory extension, for each NCE to compensate for a portion of the time spent in clinical development and regulatory review. However, the maximum extension is five years and the extension cannot extend the patent beyond 14 years from New Drug Application (NDA) approval. Similar extensions are available in European countries, known as SPC extensions, Japan and other countries. However, we will not know what, if any, extensions are available until a drug is approved. In addition, in the U.S., under provisions of the Best Pharmaceuticals for Children's Act, we may be entitled to an additional six month period of patent protection Market Exclusivity and Orphan Drug Exclusivity, for completing pediatric clinical studies in response to a FDA issued Pediatric Written Request before said exclusivities expire.

**Table of Contents**

The patent positions of companies like ours are generally uncertain and involve complex legal, technical, scientific and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in promptly filing patent applications on new discoveries, and in obtaining effective claims and enforcing those claims once granted. We focus special attention on filing patent applications for formulations and delivery regimens for our products in development to further enhance our patent exclusivity for those products. We seek to protect our proprietary technology and processes, in part, by contracting with our employees, collaborators, scientific advisors and our commercial consultants to ensure that any inventions resulting from the relationship are disclosed promptly, maintained in confidence until a patent application is filed and preferably until publication of the patent application, and assigned to us or subject to a right to obtain a license. We do not know whether any of our own patent applications or those patent applications that are licensed to us will result in the issuance of any patents. Our issued patents and those that may issue in the future, or those licensed to us, may be challenged, narrowed, invalidated or circumvented or be found to be invalid or unenforceable, which could limit our ability to stop competitors from marketing related products and reduce the term of patent protection that we may have for our products. Neither we nor our licensors can be certain that we were the first to invent the inventions claimed in our owned or licensed patents or patent applications. In addition, our competitors may independently develop similar technologies or duplicate any technology developed by us and the rights granted under any issued patents may not provide us with any meaningful competitive advantages against these competitors. Furthermore, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that any related patent may expire prior to or shortly after commencing commercialization, thereby reducing the advantage of the patent to our business and products.

We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our trade secret technology and processes, in part, by entering into confidentiality agreements with commercial partners, collaborators, employees, consultants, scientific advisors and other contractors, and by contracting with our employees and some of our commercial consultants to ensure that any trade secrets resulting from such employment or consulting are owned by us. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be discovered independently by others. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

***License Agreements***

We have acquired rights to develop and commercialize our product candidates through licenses granted by various parties. The following summarizes our material rights and obligations under those licenses:

*Mt. Sinai School of Medicine* We have acquired exclusive worldwide patent rights to develop and commercialize Amigal, Plicera and AT2220 and other pharmacological chaperones for the prevention or treatment of human diseases or clinical conditions by increasing the activity of wild-type and mutant enzymes pursuant to a license agreement with Mt. Sinai School of Medicine (MSSM) of New York University. In connection with this agreement, we issued 232,266 shares of our common stock to MSSM in April 2002. In October 2006 we issued MSSM an additional 133,333 shares of common stock and made a payment of \$1.0 million in consideration of an expanded field of use under that license. Under this agreement, to date we have paid no upfront or annual license fees and we have no milestone or future payments other than royalties on net sales. However, on October 31, 2008, we amended and restated this license agreement to, among other items, provide us with the sole right to control the prosecution of patent rights under such agreement and to clarify the portion of royalties and milestone payments we received from Shire that were payable to MSSM. In connection therewith, we agreed to pay MSSM \$2.6 million in connection with the \$50 million upfront payment that we received in November 2007 from Shire, which was already accrued for at year-end 2007, and an additional \$2.6 million for the sole right to and control over the prosecution of patent rights. This agreement

expires upon expiration of the last of the licensed patent rights, which will be in 2019, subject to any patent term extension that may be granted, or 2024 if we develop a product for combination therapy (pharmacological chaperone plus ERT) and a patent issues from the pending application covering the combination therapy, subject to any patent term extension that may be granted.

*University of Maryland, Baltimore County* We have acquired exclusive U.S. patent rights to develop and commercialize Plicera for the treatment of Gaucher disease from the University of Maryland, Baltimore County. Under this agreement, to date we have paid aggregate upfront and annual license fees of \$45 thousand. We are required to make a milestone payment upon the demonstration of safety and efficacy of Plicera for the treatment of Gaucher disease in a Phase 2 study, and another payment upon receiving FDA approval for Plicera for the treatment of Gaucher disease. We are also required to pay royalties on net sales. Upon satisfaction of both milestones, we could be required to make up to \$0.2 million in aggregate payments. This agreement expires upon expiration of the last of the licensed patent rights in 2015.

*Novo Nordisk A/S* We have acquired exclusive patent rights to develop and commercialize Plicera for all human indications. Under this agreement, to date we have paid an aggregate of \$0.4 million in license fees. We are also required to make milestone payments based on clinical progress of Plicera, with a payment due after initiation of a Phase 3 clinical trial for Plicera for the treatment of Gaucher disease and a payment due upon each filing for regulatory approval of Plicera for the treatment of Gaucher disease in any of the U.S., Europe or Japan. An additional payment is due upon approval of Plicera for the treatment of Gaucher disease in the U.S. and a payment is also due upon each approval of Plicera for the treatment of Gaucher disease in either of Europe or Japan. Assuming successful development of Plicera for the treatment of Gaucher disease in the U.S., Europe and Japan, total milestone payments would be \$7.8 million. We are also required to pay royalties on net sales. This license will terminate in 2016.

## **Table of Contents**

Under our license agreements, if we owe royalties on net sales for one of our products to more than one of the above licensors, then we have the right to reduce the royalties owed to one licensor for royalties paid to another. The amount of royalties to be offset is generally limited in each license and can vary under each agreement. For Amigal and AT2220, we will owe royalties only to MSSM and will owe no milestone payments. We would expect to pay royalties to all three licensors with respect to Plicera.

Our rights with respect to these agreements to develop and commercialize Amigal, Plicera and AT2220 may terminate, in whole or in part, if we fail to meet certain development or commercialization requirements or if we do not meet our obligations to make royalty payments.

### ***Trademarks***

In addition to our patents and trade secrets, we have filed applications to register certain trademarks in the U.S. and/or abroad, including AMICUS, AMICUS THERAPEUTICS (and design), AMIGAL and PLICERA. At present, all of the U.S. trademark applications for these marks, which are based on an intention to use these marks, have been either registered or approved by the U.S. Patent and Trademark Office and Notices of Allowances and have been issued. We have also received foreign allowances or issued foreign registrations for certain of these marks. Our ability to obtain and maintain trademark registrations will in certain instances depend on making use of the mark in commerce on or in connection with our products. For the allowed marks for our candidate products, it may be necessary to re-apply for registration if it becomes apparent that we will not use the mark in commerce within the prescribed time period.

### ***Manufacturing***

We continue to rely on contract manufacturers to supply the active pharmaceutical ingredients and gelatin capsules for Amigal, Plicera and AT2220. The active pharmaceutical ingredients for all three products are manufactured under current good manufacturing practices (cGMP), at kilogram scale initiated with commercially available starting materials. The components in the final formulation for each product are commonly used in other encapsulated products and are well characterized ingredients. We have implemented appropriate controls for assuring the quality of both active pharmaceutical ingredients and capsules. Product specifications will be established in concurrence with regulatory bodies at the time of product registration.

### ***Competition***

#### ***Overview***

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technologies, knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including commercial pharmaceutical and biotechnology enterprises, academic institutions, government agencies and private and public research institutions. Any product candidates that we successfully develop and commercialize will compete with both existing and new therapies that may become available in the future.

Many of our competitors may have significantly greater financial resources and expertise associated with research and development, regulatory approvals and marketing approved products. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunities could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects, are more convenient or are less expensive than products that we may develop. In addition, our ability to compete may be affected because in some cases insurers or other third party payors seek to encourage the use of generic products. This may have the effect of making branded products less attractive to buyers.

**Table of Contents****Major Competitors**

Our major competitors include pharmaceutical and biotechnology companies in the U.S. and abroad that have approved therapies or therapies in development for lysosomal storage disorders within our core programs. Other competitors are pharmaceutical and biotechnology companies that have approved therapies or therapies in development for genetic diseases for which pharmacological chaperone technology may be applicable. Additionally, we are aware of several early-stage, niche pharmaceutical and biotechnology companies whose core business revolves around protein misfolding; however, we are not aware that any of these companies is currently working to develop products that would directly compete with ours. The key competitive factors affecting the success of our product candidates are likely to be their efficacy, safety, convenience and price.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. The following table lists our principal competitors and publicly available information on the status of their product offerings (U.S. dollars in millions):

Competitor	Indication	Product	Class of Product	Status	2009 Sales (in millions)
Genzyme Corporation	Fabry disease	Fabrazyme®	Enzyme Replacement Therapy	Marketed	\$ 431
	Gaucher disease	Cerezyme®	Enzyme Replacement Therapy	Marketed	\$ 793
	Pompe disease	Myozyme®	Enzyme Replacement Therapy	Marketed	\$ 325
	Gaucher disease	Eliglustat tartrate	Substrate Reduction Therapy	Phase 3	N/A
Shire	Fabry disease	Replagal®	Enzyme Replacement Therapy	Marketed	\$ 194
	Gaucher disease	VPRIV	Enzyme Replacement Therapy	Approved	N/A
Actelion, Ltd.	Gaucher disease	Zavesca®	Substrate Reduction Therapy	Marketed	\$ 50
Protalix Biotherapeutics	Gaucher disease	Taliglucerase alfa D	Enzyme Replacement Therapy	NDA filed December 2009	N/A

We are aware of other companies that are conducting preclinical development activities for enzyme replacement therapies to treat Gaucher disease and Pompe disease.

**Government Regulation****FDA Approval Process**

In the U.S., pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending new drug applications (NDAs), warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Pharmaceutical product development in the U.S. typically involves preclinical laboratory and animal tests, the submission to the FDA of a notice of claimed investigational exemption or an investigational new drug application (IND), which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease. Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information including information about product chemistry, manufacturing and controls and a proposed clinical trial protocol. Long-term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.



## **Table of Contents**

A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has not commented on or questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted in compliance with federal regulations, good clinical practices (GCP), as well as under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary or permanent discontinuation of a clinical trial at any time or impose other sanctions if it believes that the clinical trial is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board (IRB), for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the drug into healthy human subjects or patients, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses and, if possible, early evidence on effectiveness. Phase 2 usually involves trials in a limited patient population, to determine the effectiveness of the drug for a particular indication or indications, dosage tolerance and optimum dosage, and identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product may begin in the U.S. The NDA must include the results of all preclinical, clinical and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee, and the manufacturer and/or sponsor under an approved new drug application are also subject to annual product and establishment user fees. These fees are typically increased annually.

The FDA has 60 days from its receipt of a NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of new drug applications. Most such applications for non-priority drug products are reviewed within ten months. The review process may be extended by FDA for three additional months to consider certain information or clarification regarding information already provided in the submission. The FDA may also refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. FDA will not approve the product unless compliance with current good manufacturing practices is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After FDA evaluates the NDA and the manufacturing facilities, it issues an approval letter, an approvable letter or a not-approvable letter. Both approvable and not-approvable letters generally outline the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will

issue an approval letter. FDA has committed to reviewing such resubmissions in 2 or 6 months depending on the type of information included.

An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy and may impose other conditions, including labeling restrictions which can materially affect the potential market and profitability of the drug. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

**Table of Contents*****The Hatch-Waxman Act***

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an abbreviated new drug application (ANDA). An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. ANDA applicants are not required to conduct or submit results of preclinical or clinical tests to prove the safety or effectiveness of their drug product, other than the requirement for bioequivalence testing. Drugs approved in this way are commonly referred to as generic equivalents to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug. The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. A certification that the new product will not infringe the already approved product's listed patents or that such patents are invalid is called a Paragraph 4 certification. If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired.

If the ANDA applicant has provided a Paragraph 4 certification to the FDA, the applicant must also send notice of the Paragraph 4 certification to the NDA and patent holders once the ANDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph 4 certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph 4 certification automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit or a decision in the infringement case that is favorable to the ANDA applicant.

The ANDA application also will not be approved until any non-patent exclusivity, such as exclusivity for obtaining approval of a new chemical entity, listed in the Orange Book for the referenced product has expired (New Chemical Entity Market Exclusivity). Federal law provides a period of five years following approval of a drug containing no previously approved active ingredients, during which ANDAs for generic versions of those drugs cannot be submitted unless the submission contains a Paragraph 4 challenge to a listed patent, in which case the submission may be made four years following the original product approval. Federal law provides for a period of three years of exclusivity following approval of a listed drug that contains previously approved active ingredients but is approved in a new dosage form, route of administration or combination, or for a new use, the approval of which was required to be supported by new clinical trials conducted by or for the sponsor, during which FDA cannot grant effective approval of an ANDA based on that listed drug for the same new dosage form, route of administration or combination, or new use.

***Other Regulatory Requirements***

Once an NDA is approved, a product will be subject to certain post-approval requirements. For instance, FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet.

Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Adverse event reporting and submission of periodic reports is required following FDA approval of an NDA. The FDA also may require post-marketing testing, known as Phase 4 testing, risk minimization action plans and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product. In addition, quality control as well as drug manufacture, packaging, and labeling procedures must

continue to conform to current good manufacturing practices, or cGMPs, after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA during which the agency inspects manufacturing facilities to access compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money and effort in the areas of production and quality control to maintain compliance with cGMPs. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered.

**Table of Contents*****Orphan Drugs***

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the U.S. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process. The first NDA applicant with FDA orphan drug designation for a particular active ingredient to receive FDA approval of the designated drug for the disease indication for which it has such designation, is entitled to a seven-year exclusive marketing period (Orphan Drug Exclusivity) in the U.S. for that product, for that indication. During the seven-year period, the FDA may not finally approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA application user fee.

***Pediatric Information***

Under the Pediatric Research Equity Act of 2003 (PREA), NDAs or supplements to NDAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted.

***Fast Track Designation***

Under the fast track program, the sponsor of a new drug candidate may request FDA to designate the drug candidate as a fast track drug concurrent with or after the filing of the IND for the drug candidate. FDA must determine if the drug candidate qualifies for fast track designation within 60 days of receipt of the sponsor's request. Once FDA designates a drug as a fast track candidate, it is required to facilitate the development and expedite the review of that drug.

In addition to other benefits such as the ability to use surrogate endpoints and have greater interactions with FDA, FDA may initiate review of sections of a fast track drug's NDA before the application is complete. This rolling review is available if the applicant provides and FDA approves a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, FDA's time period goal for reviewing an application does not begin until the last section of the NDA is submitted. Additionally, the fast track designation may be withdrawn by FDA if FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

***Priority Review***

Under FDA policies, a drug candidate is eligible for priority review, or review within a six-month time frame from the time a complete NDA is accepted for filing, if the drug candidate provides a significant improvement compared to marketed drugs in the treatment, diagnosis or prevention of a disease. A fast track designated drug candidate would ordinarily meet FDA's criteria for priority review.

***Accelerated Approval***

Under FDA's accelerated approval regulations, FDA may approve a drug for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit. In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions, or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A drug candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or confirm a clinical benefit during post-marketing studies, will allow FDA to withdraw the drug from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by FDA.



## **Table of Contents**

### ***Section 505(b)(2) New Drug Applications***

Most drug products obtain FDA marketing approval pursuant to an NDA or an ANDA. A third alternative is a special type of NDA, commonly referred to as a Section 505(b)(2) NDA, which enables the applicant to rely, in part, on the safety and efficacy data of an existing product, or published literature, in support of its application.

505(b)(2) NDAs often provide an alternate path to FDA approval for new or improved formulations or new uses of previously approved products. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference. The applicant may rely upon certain preclinical or clinical studies conducted for an approved product. The FDA may also require companies to perform additional studies or measurements to support the change from the approved product. The FDA may then approve the new product candidate for all or some of the label indications for which the referenced product has been approved, as well as for any new indication sought by the Section 505(b)(2) applicant.

To the extent that the Section 505(b)(2) applicant is relying on studies conducted for an already approved product, the applicant is required to certify to the FDA concerning any patents listed for the approved product in the Orange Book to the same extent that an ANDA applicant would. Thus approval of a 505(b)(2) NDA can be stalled until all the listed patents claiming the referenced product have expired, until any non-patent exclusivity, such as exclusivity for obtaining approval of a new chemical entity, listed in the Orange Book for the referenced product has expired, and, in the case of a Paragraph 4 certification and subsequent patent infringement suit, until the earlier of 30 months, settlement of the lawsuit or a decision in the infringement case that is favorable to the Section 505(b)(2) applicant.

### ***Anti-Kickback, False Claims Laws & The Prescription Drug Marketing Act***

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes and false claims statutes. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Violations of the anti-kickback statute are punishable by imprisonment, criminal fines, civil monetary penalties and exclusion from participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. The majority of states also have statutes or regulations similar to the federal anti-kickback law and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

### ***Physician Drug Samples***

As part of the sales and marketing process, pharmaceutical companies frequently provide samples of approved drugs to physicians. The Prescription Drug Marketing Act (the PDMA) imposes requirements and limitations upon the provision of drug samples to physicians, as well as prohibits states from licensing distributors of prescription drugs unless the state licensing program meets certain federal guidelines that include minimum standards for storage, handling and record keeping. In addition, the PDMA sets forth civil and criminal penalties for violations.

### ***Regulation Outside the U.S.***

In addition to regulations in the U.S., we will be subject to a variety of regulations in other jurisdictions governing clinical studies and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of countries outside the U.S. before we can commence clinical studies or marketing of the product in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval.



## **Table of Contents**

To obtain regulatory approval of a drug under EU regulatory systems, we may submit marketing authorizations either under a centralized or decentralized procedure. The centralized procedure, which is compulsory for medicines produced by certain biotechnological processes and optional for those which are highly innovative, provides for the grant of a single marketing authorization that is valid for all EU member states. The decentralized procedure provides for approval by one or more other, or concerned, member states of an assessment of an application performed by one member state, known as the reference member state. Under this procedure, an applicant submits an application, or dossier, and related materials including a draft summary of product characteristics, and draft labeling and package leaflet, to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must decide whether to approve the assessment report and related materials. If a member state cannot approve the assessment report and related materials on the grounds of potential serious risk to the public health, the disputed points may eventually be referred to the European Commission, whose decision is binding on all member states.

We have obtained an orphan medicinal product designation in the EU from the EMEA for Amigal for the treatment of Fabry disease and for Plicera for the treatment of Gaucher disease. We anticipate filing for orphan medicinal product designation from the EMEA for AT2220 for the treatment of Pompe disease. The EMEA grants orphan drug designation to promote the development of products that may offer therapeutic benefits for life-threatening or chronically debilitating conditions affecting not more than five in 10,000 people in the EU. In addition, orphan drug designation can be granted if the drug is intended for a life threatening, seriously debilitating or serious and chronic condition in the EU and that without incentives it is unlikely that sales of the drug in the EU would be sufficient to justify developing the drug. Orphan drug designation is only available if there is no other satisfactory method approved in the EU of diagnosing, preventing or treating the condition, or if such a method exists, the proposed orphan drug will be of significant benefit to patients.

Orphan drug designation provides opportunities for free protocol assistance and fee reductions for access to the centralized regulatory procedures before and during the first year after marketing approval, which reductions are not limited to the first year after marketing approval for small and medium enterprises. In addition, if a product which has an orphan drug designation subsequently receives EMEA marketing approval for the indication for which it has such designation, the product is entitled to orphan drug exclusivity, which means the EMEA may not approve any other application to market the same drug for the same indication for a period of ten years. The exclusivity period may be reduced to six years if the designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. Competitors may receive marketing approval of different drugs or biologics for the indications for which the orphan product has exclusivity. In order to do so, however, they must demonstrate that the new drugs or biologics provide a significant benefit over the existing orphan product. This demonstration of significant benefit may be done at the time of initial approval or in post-approval studies, depending on the type of marketing authorization granted.

As described in the section entitled "Amigal for Fabry Disease – Existing Products for the Treatment of Fabry Disease and Potential Advantages of Amigal," we believe that the orphan designation of Fabrazyme® and Replagal® in the EU will not prevent us from obtaining marketing approval of Amigal in the EU for the treatment of Fabry disease because Amigal will provide significant benefits over Fabrazyme® and Replagal®.

### **Pharmaceutical Pricing and Reimbursement**

In the U.S. and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend in part on the availability of reimbursement from third party payors. Third party payors include government health administrative authorities, managed care providers, private health insurers and other organizations. These third party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare product candidates. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. Our product candidates may not be considered cost-effective. Adequate third party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

In 2003, the U.S. government enacted legislation providing a partial prescription drug benefit for Medicare recipients that began in 2006. Government payment for some of the costs of prescription drugs may increase demand for any products for which we receive marketing approval. However, to obtain payments under this program, we would be required to sell products to Medicare recipients through managed care organizations and other health care delivery systems operating pursuant to this legislation. These organizations would negotiate prices for our products, which are likely to be lower than we might otherwise obtain. Federal, state and local governments in the U.S. continue to consider legislation to limit the growth of healthcare costs, including the cost of prescription drugs. Future legislation could limit payments for pharmaceuticals such as the drug candidates that we are developing.

**Table of Contents**

The marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third party payors fail to provide adequate coverage and reimbursement. In addition, an increasing emphasis on managed care in the U.S. has increased and will continue to increase the pressure on pharmaceutical pricing.

**Employees**

As of December 31, 2009, we had 97 full-time employees, 70 of whom were primarily engaged in research and development activities and 27 of whom provide administrative services. A total of 29 employees have an M.D. or Ph.D. degree. None of our employees are represented by a labor union. We have not experienced any work stoppages and consider our employee relations to be good.

In October 2009, we announced a work-force reduction of approximately twenty percent (20%), or twenty-six (26) employees, as part of a corporate restructuring. Reductions occurred across all levels and organizations within the Company. We implemented the restructuring to reduce costs and align our resources with our key strategic priorities.

**Our Corporate Information**

We were incorporated under the laws of the State of Delaware on February 4, 2002. Our principal executive offices are located at 6 Cedar Brook Drive, Cranbury, NJ 08512 and our telephone number is (609) 662-2000. Our website address is [www.amicustherapeutics.com](http://www.amicustherapeutics.com). We make available free of charge on our website our annual, quarterly and current reports, including amendments to such reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the U.S. Securities and Exchange Commission.

Information relating to corporate governance at Amicus Therapeutics, including our Code of Business Conduct for Employees, Executive Officers and Directors, Corporate Governance Guidelines, and information concerning our senior management team, Board of Directors, including Board Committees and Committee charters, and transactions in our securities by directors and executive officers, is available on our website at [www.amicustherapeutics.com](http://www.amicustherapeutics.com) under the Investors Corporate Governance caption and in print to any stockholder upon request. Any waivers to the Codes by directors or executive officers and any material amendment to the Code of Business Conduct and Ethics for Employees, Executive Officers and Directors will be posted promptly on our website.

We have filed applications to register certain trademarks in the U.S. and abroad, including AMICUS , AMICUS THERAPEUTICS and design, AMIGAL and PLICERA . We plan to seek FDA approval of the trademarks Amigal and Plicera for migalastat hydrochloride and isofagomine tartrate, respectively. Fabrazyme®, Cerezyme®, Myozyme®, Replagal® and Zavesca® are the property of their respective owners.

**Table of Contents**

**ITEM 1A. RISK FACTORS**

*The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects. In that case, the trading price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to the Company; or risks that the Company currently considers immaterial, may also impair the Company's operations.*

**Risks Related to Our Financial Position and Need for Additional Capital**

**We have incurred significant operating losses since our inception. We currently do not, and since inception never have had, any products available for commercial sale. We expect to incur operating losses for the foreseeable future and may never achieve or maintain profitability.**

Since inception, we have incurred significant operating losses. Our cumulative net loss attributable to common stockholders since inception was \$191 million and we had an accumulated deficit of \$170.8 million as of December 31, 2009. To date, we have financed our operations primarily through private placements of our redeemable convertible preferred stock, proceeds from our initial public offering and from our prior collaboration agreement with Shire. We have devoted substantially all of our efforts to research and development, including our preclinical development activities and clinical trials. We have not completed development of any drugs. We expect to continue to incur significant and increasing operating losses for at least the next several years and we are unable to predict the extent of any future losses as we:

- continue our ongoing Phase 3 clinical trial of Amigal (migalastat hydrochloride) for the treatment of Fabry disease to support approval in the United States;
- continue our preclinical studies on the use of pharmacological chaperones for the treatment of diseases of neurodegeneration;
- continue our preclinical studies on the combination use of pharmacological chaperones and enzyme replacement therapy;
- potentially initiate a planned Phase 3 clinical trial of Amigal for the treatment of Fabry disease to support approval in the European Union and a planned Phase 2 study with Amigal in combination with ERT for Fabry disease;
- continue the research and development of additional product candidates;
- seek regulatory approvals for our product candidates that successfully complete clinical trials; and
- establish a sales and marketing infrastructure to commercialize products for which we may obtain regulatory approval.

To become and remain profitable, we must succeed in developing and commercializing drugs with significant market potential. This will require us to be successful in a range of challenging activities, including the discovery of product candidates, successful completion of preclinical testing and clinical trials of our product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling those products for which we may obtain regulatory approval. We are only in the preliminary stages of these activities. We may never succeed in these activities and may never generate revenues that are large enough to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become or remain profitable could depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our product offerings or continue our operations.

**We commenced a workforce restructuring in October 2009 to focus our efforts on our key clinical, research and exploratory development programs and to reduce our overall cash burn rate. Even after giving effect to this restructuring, we may not have sufficient cash to fully develop and commercialize our un-partnered product candidates, and the restructuring may impact our ability to execute our business plan.**

In October 2009, we commenced a significant workforce restructuring involving the elimination of approximately 20% of our positions through layoffs from all departments throughout our organization, including senior management. Our objective with the restructuring is to reduce our overall cash burn rate and focus on our key clinical programs while maintaining core research and exploratory development capability. There can be no assurance that we will be able to reduce spending as planned or that unanticipated costs will not occur. Our restructuring efforts to focus on key programs may not prove successful due to a variety of factors, including, without limitation, risks that a smaller

workforce may have difficulty successfully completing research and development efforts. In addition, we may in the future decide to restructure operations and reduce expenses further by taking such measures as additional reductions in our workforce and program spending. Any restructuring places a substantial strain on remaining management and employees and on operational resources; and there is a risk that our business will be adversely affected by the diversion of management time to the restructuring efforts. There can be no assurance that following this restructuring, or any future restructuring, we will have sufficient cash resources to allow us to fund our operations as planned.

**Table of Contents**

**We will need substantial funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts.**

We expect to continue to incur substantial research and development expenses in connection with our ongoing activities, particularly as we continue our Phase 3 clinical trial of Amigal and potentially initiate a planned second Phase 3 clinical trial to support registration in the European Union. Further, subject to obtaining regulatory approval of any of our product candidates, we expect to incur significant commercialization expenses for product sales and marketing, securing commercial quantities of product from our manufacturers and product distribution. In addition, we no longer receive cost sharing revenue and are no longer eligible to receive milestone payments from Shire in connection with our prior collaboration agreement. In March 2010, we completed a registered direct offering of our common stock and warrants and received net proceeds of approximately \$17.1 million. While we intend to utilize these proceeds to, among other things, advance our clinical and preclinical activities, we currently have no commitments or arrangements for any additional financing to fund the research and development and commercial launch of our product candidates. We believe that the net proceeds from our initial public offering, and the March 2010 registered direct offering, together with our existing cash and cash equivalents and marketable securities, will be sufficient to enable us to fund our operating expenses and capital expenditure requirements until at least the second half of 2011. Capital may not be available when needed on terms that are acceptable to us, or at all, especially in light of the current challenging economic environment. If adequate funds are not available to us on a timely basis, we may be required to reduce or eliminate research development programs or commercial efforts.

Our future capital requirements will depend on many factors, including:

- the progress and results of our clinical trials of Amigal;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other product candidates including those testing the use of pharmacological chaperones in combination with enzyme replacement therapy and for the treatment of diseases of neurodegeneration;
- the costs, timing and outcome of regulatory review of our product candidates;
- the number and development requirements of other product candidates that we pursue;
- the costs of commercialization activities, including product marketing, sales and distribution;
- the emergence of competing technologies and other adverse market developments;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property related claims;
- the extent to which we acquire or invest in businesses, products and technologies; and
- our ability to establish collaborations and obtain milestone, royalty or other payments from any such collaborators.

**Any capital that we obtain may not be on terms favorable to us or our stockholders or may require us to relinquish valuable rights.**

Until such time, if ever, as we generate product revenue to finance our operations, we expect to finance our cash needs through public or private equity offerings and debt financings, corporate collaboration and licensing arrangements and grants from patient advocacy groups, foundations and government agencies. If we are able to raise capital by issuing equity securities, as we did in March 2010, our stockholders will experience dilution. In addition, stockholders may experience dilution if the holders of the warrants issued in connection with our March 2010 offering exercise their warrants. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and may include rights that are senior to the holders of our common stock. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences, which are not favorable to us or our stockholders. If we raise capital through additional collaboration and licensing arrangements with third parties, it may be necessary to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us or our stockholders.



**Table of Contents**

**Our short operating history may make it difficult to evaluate the success of our business to date and to assess our future viability.**

We are a development stage company. We commenced operations in February 2002. Our operations to date have been limited to organizing and staffing our company, acquiring and developing our technology and undertaking preclinical studies and limited clinical trials of our most advanced product candidates. We have not yet generated any commercial sales for any of our product candidates. We have not yet demonstrated our ability to successfully complete large-scale, clinical trials, obtain regulatory approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization.

Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. If we are successful in obtaining marketing approval for any of our lead product candidates, we will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

**Risks Related to the Development and Commercialization of Our Product Candidates**

**We depend heavily on the success of our most advanced product candidate, Amigal. All of our product candidates are still in either preclinical or clinical development. Clinical trials of our product candidates may not be successful. If we are unable to commercialize Amigal, or experience significant delays in doing so, our business will be materially harmed.**

We have invested a significant portion of our efforts and financial resources in the development of our most advanced product candidates, including Amigal. Our ability to generate product revenue, which we do not expect will occur for at least the next several years, if ever, will depend heavily on the successful development and commercialization of these product candidates. The successful commercialization of our product candidates will depend on several factors, including the following:

- successful enrollment of patients in our clinical trials on a timely basis;
- obtaining supplies of product candidates for completion of our clinical trials on a timely basis;
- successful completion of preclinical studies and clinical trials;
- obtaining regulatory agreement in the structure and design of our clinical programs;
- obtaining marketing approvals from the United States Food and Drug Administration (FDA), and similar regulatory authorities outside the U.S.;
- establishing commercial-scale manufacturing arrangements with third party manufacturers whose manufacturing facilities are operated in compliance with current good manufacturing practice (cGMP) regulations;
- launching commercial sales of the product, whether alone or in collaboration with others;
- acceptance of the product by patients, the medical community and third party payors;
- competition from other companies and their therapies;
- successful protection of our intellectual property rights from competing products in the U.S. and abroad;
- and
- a continued acceptable safety and efficacy profile of our product candidates following approval.

**If the market opportunities for our product candidates are smaller than we believe they are, then our revenues may be adversely affected and our business may suffer.**

Each of the diseases that our most advanced product candidates are being developed to address is rare. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are based on estimates.



## **Table of Contents**

Currently, most reported estimates of the prevalence of these diseases are based on studies of small subsets of the population of specific geographic areas, which are then extrapolated to estimate the prevalence of the diseases in the broader world population. In addition, as new studies are performed the estimated prevalence of these diseases may change. In fact, as a result of some recent studies, we believe that previously reported studies do not accurately account for the prevalence of Fabry disease and that the prevalence of Fabry disease could be many times higher than previously reported. There can be no assurance that the prevalence of Fabry disease or Pompe disease in the study populations, particularly in these newer studies, accurately reflects the prevalence of these diseases in the broader world population.

We estimate the number of potential patients in the broader world population who have those diseases and may respond to treatment with our product candidates by further extrapolating estimates of the prevalence of specific types of genetic mutations giving rise to these diseases. For example, we base our estimate of the percentage of Fabry patients who may respond to treatment with Amigal on the frequency of missense and other similar mutations that cause Fabry disease reported in the Human Gene Mutation Database. As a result of recent studies that estimate that the prevalence of Fabry disease could be many times higher than previously reported, we believe that the number of patients diagnosed with Fabry disease will increase and estimate that the number of Fabry patients who may benefit from the use of Amigal is significantly higher than some previously reported estimates of Fabry disease generally. If our estimates of the prevalence of Fabry disease or of the number of patients who may benefit from treatment with our product candidates prove to be incorrect, the market opportunities for our product candidates may be smaller than we believe they are, our prospects for generating revenue may be adversely affected and our business may suffer.

**Initial results from a clinical trial do not ensure that the trial will be successful and success in early stage clinical trials does not ensure success in later-stage clinical trials.**

We will only obtain regulatory approval to commercialize a product candidate if we can demonstrate to the satisfaction of the FDA or the applicable non-U.S. regulatory authority, in well-designed and conducted clinical trials, that the product candidate is safe and effective and otherwise meets the appropriate standards required for approval for a particular indication. Clinical trials are lengthy, complex and extremely expensive processes with uncertain results. A failure of one or more of our clinical trials may occur at any stage of testing. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and initial results from a clinical trial do not necessarily predict final results. We cannot be assured that these trials will ultimately be successful. For example, the Company previously announced disappointing results of a Phase 2 study of Plicera following successful Phase 1 and Phase 2 studies. In addition, patients may not be compliant with their dosing regimen or trial protocols or they may withdraw from the study at any time for any reason.

Even if our early stage clinical trials are successful, we will need to conduct additional clinical trials with larger numbers of patients receiving the drug for longer periods for all of our product candidates before we are able to seek approvals to market and sell these product candidates from the FDA and regulatory authorities outside the U.S. In addition, each of our product candidates is based on our pharmacological chaperone technology. To date, we are not aware that any product based on chaperone technology has been approved by the FDA. As a result, while we have reached agreement with the FDA on the use of a surrogate primary endpoint in our Phase 3 study for Amigal, we cannot be sure what endpoints the FDA will require us to measure in later-stage clinical trials of our other product candidates. If the FDA requires different endpoints than the endpoints we anticipate using, it may be more difficult for us to obtain, or we may be delayed in obtaining, FDA approval of our product candidates. If we are not successful in commercializing any of our lead product candidates, or are significantly delayed in doing so, our business will be materially harmed.

**We have limited experience in conducting and managing the preclinical development activities and clinical trials necessary to obtain regulatory approvals, including approval by the FDA.**

We have limited experience in conducting and managing the preclinical development activities and clinical trials necessary to obtain regulatory approvals, including approval by the FDA. We have not obtained regulatory approval nor commercialized any of our product candidates. We are currently conducting a Phase 3 clinical trial for Amigal and a Phase 1 clinical trial for AT2220 but have not yet completed a Phase 3 clinical trial for any of our product

candidates. Additionally, we are conducting preclinical studies on the combination use of pharmacological chaperones and enzyme replacement therapy in Fabry, Gaucher and Pompe disease and on the use of chaperones to treat diseases of neurodegeneration. Our limited experience might prevent us from successfully designing or implementing a clinical trial. We have limited experience in conducting and managing the application process necessary to obtain regulatory approvals and we might not be able to demonstrate that our product candidates meet the appropriate standards for regulatory approval. If we are not successful in conducting and managing our preclinical development activities or clinical trials or obtaining regulatory approvals, we might not be able to commercialize our lead product candidates, or might be significantly delayed in doing so, which will materially harm our business.

**Table of Contents**

**We may find it difficult to enroll patients in our clinical trials.**

Each of the diseases that our lead product candidates are intended to treat is relatively rare and we expect only a subset of the patients with these diseases to be eligible for our clinical trials. For example, the entry criteria for our ongoing Phase 3 study in Amigal for Fabry disease requires that patients must have a genetic mutation that we believe is responsive to Amigal, and may not have received enzyme replacement therapy in the past or must have stopped treatment for at least six months prior to enrolling in the study. Given that each of our product candidates is in the early stages of required testing, we may not be able to initiate or continue clinical trials for each or all of our product candidates if we are unable to locate a sufficient number of eligible patients to participate in the clinical trials required by the FDA or other non-U.S. regulatory agencies. The requirements of our clinical testing mandate that a patient cannot be involved in another clinical trial for the same indication. We are aware that our competitors have ongoing clinical trials for products that are competitive with our product candidates and patients who would otherwise be eligible for our clinical trials may be involved in such testing, rendering them unavailable for testing of our product candidates. Further, if we are required to include patients in our clinical trials who have never received enzyme replacement therapy, we may experience yet further difficulty and delay enrolling patients in our trials. Our inability to enroll a sufficient number of patients for any of our current or future clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether.

**If our preclinical studies do not produce positive results, if our clinical trials are delayed or if serious side effects are identified during drug development, we may experience delays, incur additional costs and ultimately be unable to commercialize our product candidates.**

Before obtaining regulatory approval for the sale of our product candidates, we must conduct, at our own expense, extensive preclinical tests to demonstrate the safety of our product candidates in animals, and clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Preclinical and clinical testing is expensive, difficult to design and implement and can take many years to complete. A failure of one or more of our preclinical studies or clinical trials can occur at any stage of testing. We may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or prevent our ability to obtain regulatory approval or commercialize our product candidates, including:

- our preclinical tests or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical testing or clinical trials or we may abandon projects that we expect to be promising;
- regulators or institutional review boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- conditions imposed on us by the FDA or any non-U.S. regulatory authority regarding the scope or design of our clinical trials may require us to resubmit our clinical trial protocols to institutional review boards for re-inspection due to changes in the regulatory environment;
- the number of patients required for our clinical trials may be larger than we anticipate or participants may drop out of our clinical trials at a higher rate than we anticipate;
- our third party contractors or clinical investigators may fail to comply with regulatory requirements or fail to meet their contractual obligations to us in a timely manner;
- we might have to suspend or terminate one or more of our clinical trials if we, the regulators or the institutional review boards determine that the participants are being exposed to unacceptable health risks;
- regulators or institutional review boards may require that we hold, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements;
- the cost of our clinical trials may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct our clinical trials, such as existing treatments like enzyme replacement therapy, may be insufficient or inadequate or we may not be able to reach agreements on acceptable terms with prospective clinical research organizations; and

the effects of our product candidates may not be the desired effects or may include undesirable side effects or the product candidates may have other unexpected characteristics.

**Table of Contents**

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete our clinical trials or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining, or may not be able to obtain, marketing approval for one or more of our product candidates;
- obtain approval for indications that are not as broad as intended or entirely different than those indications for which we sought approval; or
- have the product removed from the market after obtaining marketing approval.

Our product development costs will also increase if we experience delays in testing or approvals. We do not know whether any preclinical tests or clinical trials will be initiated as planned, will need to be restructured or will be completed on schedule, if at all. Significant preclinical or clinical trial delays also could shorten the patent protection period during which we may have the exclusive right to commercialize our product candidates. Such delays could allow our competitors to bring products to market before we do and impair our ability to commercialize our products or product candidates.

**The commercial success of any product candidates that we may develop, including Amigal, will depend upon the degree of market acceptance by physicians, patients, third party payors and others in the medical community.**

Any products that we bring to the market, including Amigal, may not gain market acceptance by physicians, patients, third party payors and others in the medical community. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the prevalence and severity of any side effects, including any limitations or warnings contained in a product's approved labeling;
- the efficacy and potential advantages over alternative treatments;
- the pricing of our product candidates;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support and timing of market introduction of competitive products;
- publicity concerning our products or competing products and treatments; and
- sufficient third party insurance coverage or reimbursement.

Even if a potential product displays a favorable efficacy and safety profile in preclinical and clinical trials, market acceptance of the product will not be known until after it is launched. Our efforts to educate the medical community and third party payors on the benefits of our product candidates may require significant resources and may never be successful. Such efforts to educate the marketplace may require more resources than are required by the conventional technologies marketed by our competitors.

**If we are unable to obtain adequate reimbursement from governments or third party payors for any products that we may develop or if we are unable to obtain acceptable prices for those products, our prospects for generating revenue and achieving profitability will suffer.**

Our prospects for generating revenue and achieving profitability will depend heavily upon the availability of adequate reimbursement for the use of our approved product candidates from governmental and other third party payors, both in the U.S. and in other markets. Reimbursement by a third party payor may depend upon a number of factors, including the third party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;



**Table of Contents**

appropriate for the specific patient;  
cost-effective; and  
neither experimental nor investigational.

Obtaining reimbursement approval for a product from each government or other third party payor is a time consuming and costly process that could require us to provide supporting scientific, clinical and cost effectiveness data for the use of our products to each payor. We may not be able to provide data sufficient to gain acceptance with respect to reimbursement or we might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any future products to such payors' satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Even when a payor determines that a product is eligible for reimbursement, the payor may impose coverage limitations that preclude payment for some uses that are approved by the FDA or non-U.S. regulatory authorities. In addition, there is a risk that full reimbursement may not be available for high priced products. Moreover, eligibility for coverage does not imply that any product will be reimbursed in all cases or at a rate that allows us to make a profit or even cover our costs. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent.

A primary trend in the U.S. healthcare industry and elsewhere is toward cost containment. We expect recent changes in the Medicare program and increasing emphasis on managed care to continue to put pressure on pharmaceutical product pricing. For example, the Medicare Prescription Drug Improvement and Modernization Act of 2003 provides a new Medicare prescription drug benefit that began in 2006 and mandates other reforms. While we cannot predict the full outcome of the implementation of this legislation, it is possible that the new Medicare prescription drug benefit, which will be managed by private health insurers and other managed care organizations, will result in additional government reimbursement for prescription drugs, which may make some prescription drugs more affordable but may further exacerbate industry wide pressure to reduce prescription drug prices. If one or more of our product candidates reaches commercialization, such changes may have a significant impact on our ability to set a price we believe is fair for our products and may affect our ability to generate revenue and achieve or maintain profitability.

**Governments outside the U.S. tend to impose strict price controls and reimbursement approval policies, which may adversely affect our prospects for generating revenue.**

In some countries, particularly European Union (EU) countries, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time (6 to 12 months or longer) after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our prospects for generating revenue, if any, could be adversely affected and our business may suffer.

**If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may be unable to generate product revenue.**

At present, we have no sales or marketing personnel. In order to commercialize any of our product candidates, we must either acquire or internally develop sales, marketing and distribution capabilities, or enter into collaborations with partners to perform these services for us. We may not be able to establish sales and distribution partnerships on acceptable terms or at all, and if we do enter into a distribution arrangement, our success will be dependent upon the performance of our partner.

In the event that we attempt to acquire or develop our own in-house sales, marketing and distribution capabilities, factors that may inhibit our efforts to commercialize our products without strategic partners or licensees include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or persuade adequate numbers of physicians to prescribe our products;
- the lack of complementary products to be offered by our sales personnel, which may put us at a competitive disadvantage against companies with broader product lines;
- unforeseen costs associated with creating our own sales and marketing team or with entering into a partnering agreement with an independent sales and marketing organization; and

efforts by our competitors to commercialize products at or about the time when our product candidates would be coming to market.



**Table of Contents**

We may co-promote our product candidates in various markets with pharmaceutical and biotechnology companies in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration. If we do enter into arrangements with third parties to perform sales and marketing services, our product revenues will be lower than if we directly sold and marketed our products and any revenues received under such arrangements will depend on the skills and efforts of others.

We may not be successful in entering into distribution arrangements and marketing alliances with third parties. Our failure to enter into these arrangements on favorable terms could delay or impair our ability to commercialize our product candidates and could increase our costs of commercialization. Dependence on distribution arrangements and marketing alliances to commercialize our product candidates will subject us to a number of risks, including:

- we may not be able to control the amount and timing of resources that our distributors may devote to the commercialization of our product candidates;
- our distributors may experience financial difficulties;
- business combinations or significant changes in a distributor's business strategy may also adversely affect a distributor's willingness or ability to complete its obligations under any arrangement; and
- these arrangements are often terminated or allowed to expire, which could interrupt the marketing and sales of a product and decrease our revenue.

If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate product revenue and may not become profitable.

**Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.**

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop and which are approved for sale. We may be exposed to product liability claims and product recalls, including those which may arise from misuse or malfunction of, or design flaws in, such products, whether or not such problems directly relate to the products and services we have provided. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- damage to our reputation;
- regulatory investigations that could require costly recalls or product modifications;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- substantial monetary awards to trial participants or patients, including awards that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available, and would damage our ability to obtain liability insurance at reasonable costs, or at all, in the future;
- loss of revenue;
- the diversion of management's attention from managing our business; and
- the inability to commercialize any products that we may develop.

## **Table of Contents**

We have liability insurance policies for our clinical trials in the geographies in which we are conducting trials. The amount of insurance that we currently hold may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost and we may not be able to obtain insurance coverage that will be adequate to satisfy any liability that may arise. On occasion, large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or a series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our available cash and adversely affect our business.

### **We face substantial competition which may result in others discovering, developing or commercializing products before or more successfully than we do.**

The development and commercialization of new drugs is highly competitive and competition is expected to increase. We face competition with respect to our current product candidates and any products we may seek to develop or commercialize in the future from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. For example, several large pharmaceutical and biotechnology companies currently market and sell products for the treatment of Fabry disease. These products include Genzyme Corporation's Fabrazyme<sup>®</sup> and Shire plc's Replagal<sup>®</sup>. In addition, Genzyme Corporation and Actelion, Ltd. market and sell Cerezyme<sup>®</sup> and Zavesca<sup>®</sup>, respectively, for the treatment of Gaucher disease, and Genzyme Corporation markets and sells Myozyme<sup>®</sup> for the treatment of Pompe disease. We are also aware of other enzyme replacement and substrate reduction therapies in development by third parties, including an agreement between Pfizer, Inc. and Protalix BioTherapeutics, Inc. to develop a new enzyme replacement therapy for the treatment of Gaucher disease.

Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Our competitors may develop products that are more effective, safer, more convenient or less costly than any that we are developing or that would render our product candidates obsolete or noncompetitive. Our competitors may also obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. We may also face competition from off-label use of other approved therapies. There can be no assurance that developments by others that will not render our product candidates obsolete or noncompetitive either during the research phase or once the products reach commercialization.

We believe that many competitors, including academic institutions, government agencies, public and private research organizations, large pharmaceutical companies and smaller more focused companies, are attempting to develop therapies for many of our target indications. Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, prosecuting intellectual property rights and marketing approved products than we do. Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to or necessary for our programs or advantageous to our business. In addition, if we obtain regulatory approvals for our products, manufacturing efficiency and marketing capabilities are likely to be significant competitive factors. We currently have no commercial manufacturing capability, sales force or marketing infrastructure. Further, many of our competitors have substantial resources and expertise in conducting collaborative arrangements, sourcing in-licensing arrangements and acquiring new business lines or businesses that are greater than our own.

### **Our business activities involve the use of hazardous materials, which require compliance with environmental and occupational safety laws regulating the use of such materials. If we violate these laws, we could be subject to significant fines, liabilities or other adverse consequences.**

Our research and development programs involve the controlled use of hazardous materials, including microbial agents, corrosive, explosive and flammable chemicals and other hazardous compounds in addition to certain biological hazardous waste. Ultimately, the activities of our third party product manufacturers when a product candidate reaches commercialization will also require the use of hazardous materials. Accordingly, we are subject to federal, state and local laws governing the use, handling and disposal of these materials. Although we believe that our safety procedures for handling and disposing of these materials comply in all material respects with the standards

prescribed by local, state and federal regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In addition, our collaborators may not comply with these laws. In the event of an accident or failure to comply with environmental laws, we could be held liable for damages that result, and any such liability could exceed our assets and resources or we could be subject to limitations or stoppages related to our use of these materials which may lead to an interruption of our business operations or those of our third party contractors. While we believe that our existing insurance coverage is generally adequate for our normal handling of these hazardous materials, it may not be sufficient to cover pollution conditions or other extraordinary or unanticipated events. Furthermore, an accident could damage or force us to shut down our operations. Changes in environmental laws may impose costly compliance requirements on us or otherwise subject us to future liabilities and additional laws relating to the management, handling, generation, manufacture, transportation, storage, use and disposal of materials used in or generated by the manufacture of our products or related to our clinical trials. In addition, we cannot predict the effect that these potential requirements may have on us, our suppliers and contractors or our customers.

## **Table of Contents**

### **Risks Related to Our Dependence on Third Parties**

**Use of third parties to manufacture our product candidates may increase the risk that we will not have sufficient quantities of our product candidates or such quantities at an acceptable cost, and clinical development and commercialization of our product candidates could be delayed, prevented or impaired.**

We do not own or operate manufacturing facilities for clinical or commercial production of our product candidates. We have limited personnel with experience in drug manufacturing and we lack the resources and the capabilities to manufacture any of our product candidates on a clinical or commercial scale. We currently outsource all manufacturing and packaging of our preclinical and clinical product candidates and products to third parties. The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, particularly in scaling up initial production. These problems include difficulties with production costs and yields and quality control, including stability of the product candidate. We do not currently have any agreements with third party manufacturers for the long-term commercial supply of any of our product candidates. We may be unable to enter into agreements for commercial supply with third party manufacturers, or may be unable to do so on acceptable terms. Even if we enter into these agreements, the manufacturers of each product candidate will be single source suppliers to us for a significant period of time. Reliance on third party manufacturers entails risks, to which we would not be subject if we manufactured product candidates or products ourselves, including:

- reliance on the third party for regulatory compliance and quality assurance;
- limitations on supply availability resulting from capacity and scheduling constraints of the third parties;
- impact on our reputation in the marketplace if manufacturers of our products, once commercialized, fail to meet the demands of our customers;
- the possible breach of the manufacturing agreement by the third party because of factors beyond our control; and
- the possible termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us.

The failure of any of our contract manufacturers to maintain high manufacturing standards could result in injury or death of clinical trial participants or patients using products. Such failure could also result in product liability claims, product recalls, product seizures or withdrawals, delays or failures in testing or delivery, cost overruns or other problems that could seriously harm our business or profitability.

Our contract manufacturers will be required to adhere to FDA regulations setting forth cGMP. These regulations cover all aspects of the manufacturing, testing, quality control and recordkeeping relating to our product candidates and any products that we may commercialize. Our manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the U.S. Our failure, or the failure of our third party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect regulatory approval and supplies of our product candidates.

Our product candidates and any products that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that are both capable of manufacturing for us and willing to do so. If the third parties that we engage to manufacture products for our preclinical tests and clinical trials should cease to continue to do so for any reason, we likely would experience delays in advancing these trials while we identify and qualify replacement suppliers and we may be unable to obtain replacement supplies on terms that are favorable to us. Later relocation to another manufacturer will also require notification, review and other regulatory approvals from the FDA and other regulators and will subject our production to further cost and instability in the availability of our product candidates. In addition, if we are not able to obtain adequate supplies of our product candidates or the drug substances used to manufacture them, it will be more difficult for us to develop our product candidates and compete effectively.



## **Table of Contents**

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to develop product candidates and commercialize any products that obtain regulatory approval on a timely and competitive basis.

**Materials necessary to manufacture our product candidates may not be available on commercially reasonable terms, or at all, which may delay the development and commercialization of our product candidates.**

We rely on the manufacturers of our product candidates to purchase from third party suppliers the materials necessary to produce the compounds for our preclinical and clinical studies and will rely on these other manufacturers for commercial distribution if we obtain marketing approval for any of our product candidates. Suppliers may not sell these materials to our manufacturers at the time we need them or on commercially reasonable terms and all such prices are susceptible to fluctuations in price and availability due to transportation costs, government regulations, price controls and changes in economic climate or other foreseen circumstances. We do not have any control over the process or timing of the acquisition of these materials by our manufacturers. Moreover, we currently do not have any agreements for the commercial production of these materials. If our manufacturers are unable to obtain these materials for our preclinical and clinical studies, product testing and potential regulatory approval of our product candidates would be delayed, significantly impacting our ability to develop our product candidates. If our manufacturers or we are unable to purchase these materials after regulatory approval has been obtained for our product candidates, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would materially affect our ability to generate revenues from the sale of our product candidates.

**We rely on third parties to conduct certain preclinical development activities and our clinical trials and those third parties may not perform satisfactorily, including failing to meet established deadlines for the completion of such activities and trials.**

We do not independently conduct clinical trials for our product candidates or certain preclinical development activities of our product candidates, such as long-term safety studies in animals. We rely on, or work in conjunction with, third parties, such as contract research organizations, medical institutions and clinical investigators, to perform these functions. For example, we rely heavily on a contract research organization to help us conduct our ongoing Phase 3 clinical trial in Amigal for the treatment of Fabry disease. Our reliance on these third parties for preclinical and clinical development activities reduces our control over these activities. We are responsible for ensuring that each of our preclinical development activities and our clinical trials is conducted in accordance with the applicable general investigational plan and protocols, however, we have no direct control over these researchers or contractors (except by contract), as they are not our employees. Moreover, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practices for conducting, recording and reporting the results of our preclinical development activities and our clinical trials to assure that data and reported results are credible and accurate and that the rights, safety and confidentiality of trial participants are protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our preclinical development activities or our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, regulatory approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates. Moreover, these third parties may be bought by other entities or they may go out of business, thereby preventing them from meeting their contractual obligations.

We also rely on other third parties to store and distribute drug supplies for our preclinical development activities and our clinical trials. Any performance failure on the part of our existing or future distributors could delay clinical development or regulatory approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue.

Extensions, delays, suspensions or terminations of our preclinical development activities and our clinical trials as a result of the performance of our independent clinical investigators and contract research organizations will delay, and make more costly, regulatory approval for any product candidates that we may develop. Any change in a contract research organization during an ongoing preclinical development activity or clinical trial could seriously delay that trial and potentially compromise the results of the activity or trial.



## **Table of Contents**

### **We may not be successful in maintaining or establishing collaborations, which could adversely affect our ability to develop and, particularly in international markets, commercialize products.**

For each of our product candidates, we are collaborating with physicians, patient advocacy groups, foundations and government agencies in order to assist with the development of our products. We plan to pursue similar activities in future programs and plan to evaluate the merits of retaining commercialization rights for ourselves or entering into selective collaboration arrangements with leading pharmaceutical or biotechnology companies. We also may seek to establish collaborations for the sales, marketing and distribution of our products. If we elect to seek collaborators in the future but are unable to reach agreements with suitable collaborators, we may fail to meet our business objectives for the affected product or program. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts, if any, to establish and implement collaborations or other alternative arrangements. The terms of any collaboration or other arrangements that we establish, if any, may not be favorable to us.

Any collaboration that we enter into may not be successful. The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. It is likely that any collaborators of ours will have significant discretion in determining the efforts and resources that they will apply to these collaborations. The risks that we may be subject to in possible future collaborations include the following:

- our collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach or lack of scientific or clinical progress by us;
- our collaborators are likely to have the first right to maintain or defend our intellectual property rights and, although we would likely have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not, our ability to do so may be compromised by our collaborators acts or omissions; and
- our collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability.

Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Such terminations or expirations may adversely affect us financially and could harm our business reputation in the event we elect to pursue collaborations that ultimately expire or are terminated. For example, in October 2009, we and Shire Pharmaceuticals Ireland Ltd. (Shire) mutually terminated our collaboration agreement pursuant to which we were jointly developing our three product candidates for the treatment of lysosomal storage disorders.

### **Risks Related to Our Intellectual Property**

#### **If we are unable to obtain and maintain protection for the intellectual property relating to our technology and products, the value of our technology and products will be adversely affected.**

Our success will depend in large part on our ability to obtain and maintain protection in the U.S. and other countries for the intellectual property covering or incorporated into our technology and products. The patent situation in the field of biotechnology and pharmaceuticals generally is highly uncertain and involves complex legal, technical, scientific and factual questions. We may not be able to obtain additional issued patents relating to our technology or products. Even if issued, patents issued to us or our licensors may be challenged, narrowed, invalidated, held to be unenforceable or circumvented, which could limit our ability to stop competitors from marketing similar products or reduce the term of patent protection we may have for our products. Changes in either patent laws or in interpretations of patent laws in the U.S. and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- we or our licensors were the first to make the inventions covered by each of our pending patent applications;
- we or our licensors were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies;



any patents issued to us or our licensors will provide a basis for commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;  
we will develop additional proprietary technologies that are patentable;  
we will file patent applications for new proprietary technologies promptly or at all;  
our patents will not expire prior to or shortly after commencing commercialization of a product; or  
the patents of others will not have a negative effect on our ability to do business.

## **Table of Contents**

In addition, we cannot be assured that any of our pending patent applications will result in issued patents. In particular, we have filed patent applications in the European Patent Office and other countries outside the U.S. that have not been issued as patents. These pending applications include, among others, the patent applications we license pursuant to a license agreement with Mount Sinai School of Medicine of New York University. If patents are not issued in respect of our pending patent applications, we may not be able to stop competitors from marketing similar products in Europe and other countries in which we do not have issued patents.

The patents and patent applications that we have licensed from Mt. Sinai School of Medicine relating to use of Amigal to treat Fabry disease expire in 2018 in the U.S., 2019 in Europe and the foreign counterpart patent applications in Japan and Canada, if issued, will expire in 2019. Patents that we have licensed claiming isofagomine (the active chemical moiety in Plicera) expire between 2015 and 2016 in the U.S. and in 2015 in the UK, France, Sweden, Germany, Switzerland and Japan, and in 2018 in the U.S. for methods of use. We own a U.S. patent and its corresponding foreign applications covering isofagomine tartrate (the specific salt form of the active pharmaceutical ingredient in Plicera) and its use to treat Gaucher disease, which expires in 2027. Other than the patent application covering the use of isofagomine tartrate to treat Gaucher disease, we currently have no pending or issued patents covering methods of using Plicera outside of the U.S. Patents and patent applications that we own or have licensed relating to the use of AT2220 expire in 2018 in the U.S. Further, we currently do not have composition of matter or method of use protection for AT2220 outside of the U.S. Where we lack patent protection outside of the U.S., we intend to seek orphan medicinal product designation and to rely on statutory data exclusivity provisions in jurisdictions outside the U.S. where such protections are available, including Europe. If we are unable to obtain such protection outside the U.S., our competitors may be free to use and sell Plicera and/or AT2220 outside of the U.S. and there will be no liability for infringement or any other barrier to competition. The patent rights that we own or have licensed relating to our product candidates are limited in ways that may affect our ability to exclude third parties from competing against us if we obtain regulatory approval to market these product candidates. In particular:

We do not hold composition of matter patents covering Amigal and AT2220. Composition of matter patents can provide protection for pharmaceutical products to the extent that the specifically covered compositions are important. For our product candidates for which we do not hold composition of matter patents, competitors who obtain the requisite regulatory approval can offer products with the same composition as our products so long as the competitors do not infringe any method of use patents that we may hold.

For some of our product candidates, the principal patent protection that covers or those we expect will cover, our product candidate is a method of use patent. This type of patent only protects the product when used or sold for the specified method. However, this type of patent does not limit a competitor from making and marketing a product that is identical to our product that is labeled for an indication that is outside of the patented method, or for which there is a substantial use in commerce outside the patented method.

Moreover, physicians may prescribe such a competitive identical product for indications other than the one for which the product has been approved, or off-label indications, that are covered by the applicable patents. Although such off-label prescriptions may infringe or induce infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

Our patents also may not afford us protection against competitors with similar technology. Because patent applications in the U.S. and many other jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind the actual discoveries, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in our or their issued patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications. If a third party has also filed a U.S. patent application covering our product candidates or a similar invention, we may have to participate in an adversarial proceeding, known as an interference, declared by the U.S. Patent and Trademark Office to determine priority of invention in the U.S. The costs of these proceedings could be substantial and it is possible that our efforts could be unsuccessful, resulting in a loss of our U.S. patent position.

**If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business.**

We are a party to a number of license agreements including agreements with the Mount Sinai School of Medicine of New York University, the University of Maryland, Baltimore County and Novo Nordisk A/S, pursuant to which we license key intellectual property relating to our lead product candidates. We expect to enter into additional licenses in the future. Under our existing licenses, we have the right to enforce the licensed patent rights. Our existing licenses impose, and we expect that future licenses will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license, in which event we might not be able to market any product that is covered by the licensed patents.

**Table of Contents**

**If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.**

We seek to protect our know-how and confidential information, in part, by confidentiality agreements with our employees, corporate partners, outside scientific collaborators, sponsored researchers, consultants and other advisors. We also have confidentiality and invention or patent assignment agreements with our employees and our consultants. If our employees or consultants breach these agreements, we may not have adequate remedies for any of these breaches. In addition, our trade secrets may otherwise become known to or be independently developed by others. Enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the U.S. may be less willing to protect trade secrets. Costly and time consuming litigation could be necessary to seek to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

**If we infringe or are alleged to infringe the intellectual property rights of third parties, it will adversely affect our business.**

Our research, development and commercialization activities, as well as any product candidates or products resulting from these activities, may infringe or be accused of infringing one or more claims of an issued patent or may fall within the scope of one or more claims in a published patent application that may subsequently issue and to which we do not hold a license or other rights. Third parties may own or control these patents or patent applications in the U.S. and abroad. These third parties could bring claims against us that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, we or they could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit.

No assurance can be given that patents do not exist, have not been filed, or could not be filed or issued, which contain claims covering our products, technology or methods. Because of the number of patents issued and patent applications filed in our field, we believe there is a risk that third parties may allege they have patent rights encompassing our products, technology or methods.

We are aware, for example, of U.S. patents, and corresponding international counterparts, owned by third parties that contain claims related to treating protein misfolding. If we were to challenge the validity of any issued U.S. patent in court, we would need to overcome a presumption of validity that attaches to every patent. This burden is high and would require us to present clear and convincing evidence as to the invalidity of the patent's claims. There is no assurance that a court would find in our favor on infringement or validity.

In order to avoid or settle potential claims with respect to any of the patent rights described above or any other patent rights of third parties, we may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we or our future collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. This could harm our business significantly.

Others may sue us for infringing their patent or other intellectual property rights or file nullity, opposition or interference proceedings against our patents, even if such claims are without merit, which would similarly harm our business. Furthermore, during the course of litigation, confidential information may be disclosed in the form of documents or testimony in connection with discovery requests, depositions or trial testimony. Disclosure of our confidential information and our involvement in intellectual property litigation could materially adversely affect our business.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including interference proceedings declared by the U.S. Patent and Trademark Office and opposition proceedings in the European Patent Office, regarding intellectual property rights with respect to our products and technology. Even if we prevail, the cost to us of any patent litigation or other

proceeding could be substantial.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from any litigation could significantly limit our ability to continue our operations. Patent litigation and other proceedings may also absorb significant management time.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We try to ensure that our employees do not use the proprietary information or know-how of others in their work for us. However, we may be subject to claims that we or these employees have inadvertently or otherwise used or disclosed intellectual property, trade secrets or other proprietary information of any such employee's former employer. Litigation may be necessary to defend against these claims and, even if we are successful in defending ourselves, could result in substantial costs to us or be distracting to our management. If we fail to defend any such claims, in addition to paying monetary damages, we may jeopardize valuable intellectual property rights, disclose confidential information or lose personnel.

**Table of Contents**

**Risks Related to Regulatory Approval of Our Product Candidates**

**If we are not able to obtain and maintain required regulatory approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.**

Our product candidates, including Amigal, and the activities associated with their development and commercialization, including their testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the U.S. and by comparable authorities in other countries. Failure to obtain regulatory approval for a product candidate will prevent us from commercializing the product candidate in the jurisdiction of the regulatory authority. We have not obtained regulatory approval to market any of our product candidates in any jurisdiction. We have only limited experience in filing and prosecuting the applications necessary to obtain regulatory approvals and expect to rely on third party contract research organizations to assist us in this process.

Securing FDA approval requires the submission of extensive preclinical and clinical data and supporting information to the FDA for each therapeutic indication to establish the product candidate's safety and efficacy. Securing FDA approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the FDA. Our future products may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

Our product candidates may fail to obtain regulatory approval for many reasons, including:

- our failure to demonstrate to the satisfaction of the FDA or comparable regulatory authorities that a product candidate is safe and effective for a particular indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable regulatory authorities for approval;
- our inability to demonstrate that a product candidate's benefits outweigh its risks;
- our inability to demonstrate that the product candidate is at least as effective as existing therapies;
- the FDA's or comparable regulatory authorities' disagreement with the manner in which we interpret the data from preclinical studies or clinical trials;
- the FDA's or comparable regulatory authorities' failure to approve the manufacturing processes, quality procedures or manufacturing facilities of third party manufacturers with which we contract for clinical or commercial supplies; and
- a change in the approval policies or regulations of the FDA or comparable regulatory authorities or a change in the laws governing the approval process.

The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application may cause delays in the approval or rejection of an application. The FDA and non-U.S. regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post approval commitments that render the approved product not commercially viable. Any FDA or other regulatory approval of our product candidates, once obtained, may be withdrawn, including for failure to comply with regulatory requirements or if clinical or manufacturing problems follow initial marketing.

**Table of Contents**

**Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or commercialization.**

Undesirable side effects caused by our product candidates could interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all targeted indications, and in turn prevent us from commercializing our product candidates and generating revenues from their sale. For example, in a clinical trial of AT2220 for Pompe disease, two patients experienced self-reported adverse events and subsequently withdrew from the trial. The events were categorized by the site investigator as serious and probably related to treatment of AT2220. Further, in a clinical trial of Amigal for Fabry disease, one patient with a history of hypertension experienced increased blood pressure during the course of the trial which was reported by the investigator as possibly related to the drug; and Amigal has been shown to cause reversible infertility effects in mice. In addition, if any of our product candidates receive marketing approval and we or others later identify undesirable side effects caused by the product:

- regulatory authorities may require the addition of restrictive labeling statements;
- regulatory authorities may withdraw their approval of the product; and
- we may be required to change the way the product is administered or conduct additional clinical trials.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing the product candidate, which in turn could delay or prevent us from generating significant revenues from its sale or adversely affect our reputation.

**We may not be able to obtain orphan drug exclusivity for our product candidates. If our competitors are able to obtain orphan drug exclusivity for their products that are the same drug as our product candidates, we may not be able to have competing products approved by the applicable regulatory authority for a significant period of time.**

Regulatory authorities in some jurisdictions, including the U.S. and Europe, may designate drugs for relatively small patient populations as orphan drugs. We obtained orphan drug designations from the FDA for Amigal for the treatment of Fabry disease on February 25, 2004, for the active ingredient in Plicera for the treatment of Gaucher disease on January 10, 2006 and for AT2220 for the treatment of Pompe disease on June 18, 2007. We also obtained orphan medicinal product designation in the EU for Amigal on May 22, 2006 and for Plicera on October 23, 2007. We anticipate filing for orphan drug designation in the EU for AT2220 for the treatment of Pompe disease. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the applicable regulatory authority from approving another marketing application for the same drug for that time period. The applicable period is 7 years in the U.S. and 10 years in Europe. For a drug composed of small molecules, the FDA defines same drug as a drug that contains the same active molecule and is intended for the same use. Obtaining orphan drug exclusivity for Amigal and Plicera may be important to each of the product candidate's success. Even if we obtain orphan drug exclusivity for Amigal or Plicera for these indications, we may not be able to maintain it. For example, if a competitive product that is the same drug as our product candidate is shown to be clinically superior to our product candidate, any orphan drug exclusivity we have obtained will not block the approval of such competitive product and we may effectively lose what had previously been orphan drug exclusivity.

**Any product for which we obtain marketing approval could be subject to restrictions or withdrawal from the market and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products, when and if any of them are approved.**

Any product for which we obtain marketing approval, along with the manufacturing processes, post approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and comparable regulatory authorities. These requirements include submissions of safety and other post marketing information and reports, registration requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. Even if we obtain regulatory approval of a product, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post marketing testing and surveillance to monitor the safety

or efficacy of the product. We also may be subject to state laws and registration requirements covering the distribution of our products. Later discovery of previously unknown problems with our products, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in actions such as:

- restrictions on such products, manufacturers or manufacturing processes;
- warning letters;
- withdrawal of the products from the market;



**Table of Contents**

refusal to approve pending applications or supplements to approved applications that we submit;  
voluntary or mandatory recall;  
fines;  
suspension or withdrawal of regulatory approvals or refusal to approve pending applications or  
supplements to approved applications that we submit;  
refusal to permit the import or export of our products;  
product seizure or detentions;  
injunctions or the imposition of civil or criminal penalties; and  
adverse publicity.

If we, or our suppliers, third party contractors, clinical investigators or collaborators are slow to adapt, or are unable to adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements or policies, we or our collaborators may lose marketing approval for our products when and if any of them are approved, resulting in decreased revenue from milestones, product sales or royalties.

**Failure to obtain regulatory approval in international jurisdictions would prevent us from marketing our products abroad.**

We intend to have our products marketed outside the U.S. In order to market our products in the EU and many other jurisdictions, we must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. The approval procedures vary among countries and can involve additional testing and clinical trials. The time required to obtain approval may differ from that required to obtain FDA approval. The regulatory approval process outside the U.S. may include all of the risks associated with obtaining FDA approval. In addition, in many countries outside the U.S., it is required that the product be approved for reimbursement by government-backed healthcare regulators or insurance providers before the product can be approved for sale in that country. We may not obtain approvals from regulatory authorities outside the U.S. on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the U.S. does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any market.

**Risks Related to Employee Matters**

**Our future success depends on our ability to retain our Chief Executive Officer and other key executives and to attract, retain and motivate qualified personnel.**

We are highly dependent on John F. Crowley, our Chairman, President and Chief Executive Officer, Matthew R. Patterson, our Chief Operating Officer, David J. Lockhart, Ph.D., our Chief Scientific Officer and Pol F. Boudes, M.D., our Chief Medical Officer. These executives each have significant pharmaceutical industry experience, including Mr. Crowley, with whom we have entered into an employment agreement that runs for successive one year terms until either we or Mr. Crowley elect to terminate the agreement. We may terminate Mr. Crowley's employment without cause at any time, or we may decide not to extend Mr. Crowley's agreement at the end of any term, or he may terminate his employment for good reason at any time, in each case subject to certain severance payments and benefits. Mr. Crowley is a commissioned officer in the U.S. Navy (Reserve). The U.S. recently called Mr. Crowley to service, which he fulfilled, from September 11, 2006 to March 5, 2007, and he may be called to active duty service again at any time. The loss of Mr. Crowley for protracted military duty could materially adversely affect our business. We are also parties to employment agreements with each of Mr. Patterson, Dr. Lockhart and Dr. Boudes. These employment agreements each provide for an initial term of two years, and will continue thereafter for successive two-year periods until we provide the executive with written notice of the end of the agreement in accordance with its terms. We may terminate any of these executives without cause at any time, or one of these executives may quit for good reason within six months of the occurrence of certain corporate changes, in each case subject to certain severance payments and benefits. The loss of the services of any of these executives might impede the achievement of our research, development and commercialization objectives and materially adversely affect our business. We do not maintain key person insurance on Mr. Crowley or on any of our other executive officers.



## **Table of Contents**

We have become even more dependent on existing personnel since the significant workforce restructuring that we commenced in October 2009, involving the elimination of approximately 20% of our positions through layoffs from all departments throughout our organization, including senior management. While the restructuring was designed to focus the Company on its key clinical programs while maintaining core research and exploratory development capability, the restructuring may adversely affect the pace and breadth of our research and development efforts. Recruiting and retaining qualified scientific personnel, clinical personnel and sales and marketing personnel will also be critical to our success. Our industry has experienced a high rate of turnover in recent years. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel, particularly in New Jersey and surrounding areas. Although we believe we offer competitive salaries and benefits, we may have to increase spending in order to retain personnel. Also, when recruiting new personnel, the occurrence of our October 2009 workforce restructuring may make it more difficult to attract new personnel. If we fail to retain our remaining qualified personnel or replace them when they leave, we may be unable to continue our development and commercialization activities.

In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

### **Risks Related to Our Common Stock**

#### **Our executive officers, directors and principal stockholders maintain the ability to control all matters submitted to our stockholders for approval.**

Our executive officers, directors and principal stockholders beneficially own shares representing approximately 73% of our common stock as of December 31, 2009. As a result, if these stockholders were to choose to act together, they would be able to control all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, will control the election of directors and approval of any merger, consolidation, sale of all or substantially all of our assets or other business combination or reorganization. This concentration of voting power could delay or prevent an acquisition of us on terms that other stockholders may desire. The interests of this group of stockholders may not always coincide with the interests of other stockholders, and they may act, whether by meeting or written consent of stockholders, in a manner that advances their best interests and not necessarily those of other stockholders, including obtaining a premium value for their common stock, and might affect the prevailing market price for our common stock.

#### **Provisions in our corporate charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.**

Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions:

- establish a classified board of directors, and, as a result, not all directors are elected at one time;
- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which stockholders can remove directors from our board of directors;
- establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;

limit who may call stockholder meetings;

authorize our board of directors to issue preferred stock, without stockholder approval, which could be used to institute a poison pill that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and require the approval of the holders of at least 67% of the votes that all our stockholders would be entitled to cast to amend or repeal certain provisions of our charter or bylaws.

**Table of Contents**

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

**An active trading market for our common stock may not develop.**

We completed our initial public offering of equity securities in June 2007, and prior to this offering, there was no public market for our common stock. Although we have been listed on The NASDAQ Global Market, an active trading market for our common stock may never develop or be sustained. If an active market for our common stock does not develop or is not sustained, it may be difficult for our stockholders to sell shares since our initial public offering without depressing the market price for our common stock.

**If the price of our common stock is volatile, purchasers of our common stock could incur substantial losses.**

The price of our common stock is volatile. The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- results of clinical trials of our product candidates or those of our competitors;
- our entry into or the loss of a significant collaboration;
- regulatory or legal developments in the U.S. and other countries, including changes in the health care payment systems;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts' reports or recommendations;
- general economic, industry and market conditions;
- results of clinical trials conducted by others on drugs that would compete with our product candidates;
- developments or disputes concerning patents or other proprietary rights;
- public concern over our product candidates or any products approved in the future;
- litigation;
- future sales or anticipated sales of our common stock by us or our stockholders; and
- the other factors described in this Risk Factors section.

For these reasons and others potential purchasers of our common stock should consider an investment in our common stock as risky and invest only if they can withstand a significant loss and wide fluctuations in the marked value of their investment.

**Table of Contents**

**If securities or industry analysts do not publish research or reports or publish unfavorable research about our business, the price of our common stock and trading volume could decline.**

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If securities or industry analysts do not initiate or continue coverage of us, the trading price for our common stock would be negatively affected. In the event we obtain securities or industry analyst coverage, if one or more of the analysts who covers us downgrades our common stock, the price of our common stock would likely decline. If one or more of these analysts ceases to cover us or fails to publish regular reports on us, interest in the purchase of our common stock could decrease, which could cause the price of our common stock or trading volume to decline.

**Item 1B. UNRESOLVED STAFF COMMENTS.**

None.

**Item 2. PROPERTIES.**

We currently lease approximately 59,000 square feet of subleased office and laboratory space in Cranbury, New Jersey and 7,700 square feet of subleased office and laboratory space in San Diego, California under various lease agreements that terminate no later than February 2012. We believe that our current office and laboratory facilities are adequate and suitable for our current and anticipated needs.

**Item 3. LEGAL PROCEEDINGS.**

We are not currently a party to any material legal proceedings.

**Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.**

No matters were submitted to a vote of security holders during the fourth quarter of the year ended December 31, 2009.

**Table of Contents****PART II****Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.****Market For Our Common Stock**

Our common stock has been traded on the NASDAQ Global Market under the symbol FOLD since May 31, 2007. Prior to that time, there was no public market for our common stock. The following table sets forth the range of high and low closing sales prices of our common stock as quoted on the NASDAQ Global Market for the periods indicated.

	<b>High</b>	<b>Low</b>
<b>2009</b>		
First Quarter	\$ 12.30	\$ 6.26
Second Quarter	13.50	6.44
Third Quarter	12.49	8.66
Fourth Quarter	9.05	3.21
<b>2008</b>		
First Quarter	\$ 11.84	\$ 9.00
Second Quarter	12.35	9.00
Third Quarter	18.00	10.52
Fourth Quarter	15.78	7.16

The closing price for our common stock as reported by the NASDAQ Global Market on February 26, 2010 was \$3.31 per share. As of February 26, 2010, there were 38 holders of record of our common stock.

**Dividends**

We have never declared or paid any dividends on our capital stock. We currently intend to retain any future earnings to finance our research and development efforts, the further development of our pharmacological chaperone technology and the expansion of our business. We do not intend to declare or pay cash dividends to our stockholders in the foreseeable future.

**Recent Sales of Unregistered Securities**

None.

**Use of Proceeds from the Sale of Registered Securities***Initial Public Offering*

Our initial public offering of common stock was effected through a Registration Statement on Form S-1 (File No. 333-141700) that was declared effective by the Securities and Exchange Commission (SEC) on May 30, 2007. We registered an aggregate of 5,750,000 shares of our common stock. On June 5, 2007, at the closing of the offering, 5,000,000 shares of common stock were sold on our behalf at an initial public offering price of \$15.00 per share, for aggregate offering proceeds of \$75.0 million. The initial public offering was underwritten and managed by Morgan Stanley, Merrill Lynch & Co., JPMorgan, Lazard Capital Markets and Pacific Growth Equities, LLC. Following the sale of the 5,000,000 shares, the public offering terminated.

After deducting expenses of approximately \$6.9 million, we received net offering proceeds of approximately \$68.1 million from our initial public offering. As of December 31, 2009, approximately \$58.9 million of the net proceeds from our initial public offering were maintained in money market funds and in investment-grade, interest bearing instruments, pending their use. We have used the remaining proceeds of approximately \$9.2 million for clinical development of our projects, research and development activities relating to additional preclinical projects and to fund working capital and other general corporate purposes.

The foregoing represents our best estimate of our use of proceeds for the period indicated.





**Table of Contents**

*March 2010 Registered Direct Offering*

In March 2010, we sold 4,946,524 million shares of our common stock and warrants to purchase 1,854,946 million shares of common stock in a registered direct offering to a select group of institutional investors through a Registration Statement on Form S-3 (File No. 333-158405) that was declared effective by the SEC on May 27, 2009. The shares of common stock and warrants were sold in units consisting of one share of common stock and one warrant to purchase 0.375 shares of common stock at a price of \$3.74 per unit. The warrants have a term of four years and are exercisable any time on or after the six month anniversary of the date they were issued, at an exercise price of \$4.43 per share. The aggregate offering proceeds were \$18.5 million. Leerink Swann LLC served as sole placement agent for the offering. Following the sale of the common stock and warrants, the public offering terminated.

We paid Leerink Swann a placement agency fee equal to 5.7% of the aggregate offering proceeds, approximately \$1.05 million. The net proceeds of the offering are expected to be approximately \$17.1 million after deducting the placement agency fee and all other estimated offering expenses. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning ten percent or more of any class of our equity securities or to any other affiliates.

Following the close of the offering, we invested all of the net proceeds in money market funds and in investment-grade, interest bearing instruments, pending their use. We intend to use the proceeds from the offering to further advance the development of our lead product candidate, Amigal, including the initiation of the Phase 3 study to support registration in the European Union and the completion of certain activities required for the submission of a license application globally, as well as for general corporate matters.

**Table of Contents****Performance Graph**

The following performance graph shows the total shareholder return of an investment of \$100 cash on May 31, 2007, the date our common stock first started trading on the NASDAQ Global Market, for (i) our common stock, (ii) the NASDAQ Composite Index (U.S.) and (iii) the NASDAQ Biotechnology Index as of December 31, 2009. Pursuant to applicable SEC rules, all values assume reinvestment of the full amount of all dividends, however no dividends have been declared on our common stock to date. The stockholder return shown on the graph below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder returns.

\* \$100 invested  
on May 31,  
2007 in Amicus  
Therapeutics,  
Inc. stock or in  
index-including  
reinvestment of  
dividends.

	<b>5/31/2007</b>	<b>12/31/2007</b>	<b>12/31/2008</b>	<b>12/31/2009</b>
<b>Amicus Therapeutics, Inc.</b>	100	74	55	28
<b>NASDAQ Composite</b>	100	102	61	87
<b>NASDAQ Biotechnology</b>	100	100	87	101

*The stock price performance included in this graph is not necessarily indicative of future stock price performance.*

**Table of Contents****Issuer Purchases of Equity Securities**

The following table sets forth purchases of our common stock for the three months ended December 31, 2009:

<b>Period</b>	<b>(a) Total number of shares purchased</b>	<b>(b) Average Price Paid per Share</b>	<b>(c) Total number of shares purchased as part of publicly announced plans or programs</b>	<b>(d) Maximum number of shares that may yet be purchased under the plans or programs</b>
October 1, 2009 – October 31, 2009	220	\$ 8.75		2,655
November 1, 2009 – November 30, 2009	220	\$ 3.84		2,435
December 1, 2009 – December 31, 2009	220	\$ 3.36		2,215
<b>Total</b>	<b>660</b>			

Pursuant to a restricted stock award dated October 2, 2006 between Amicus Therapeutics, Inc. and James E. Dentzer, our former Chief Financial Officer, Mr. Dentzer was granted 40,000 shares, 25% of which vested on October 2, 2007 and the remaining shares vest in a series of thirty-six successive equal monthly installments which began on November 1, 2007, with the final installment due to vest on November 1, 2010. In order to comply with the minimum statutory federal tax withholding rate of 25% plus 1.45% for Medicare, Mr. Dentzer surrenders a portion of his vested shares on each vesting date, representing 26.45% of the total value of the shares then vested.

**Table of Contents****Item 6. SELECTED FINANCIAL DATA.****(in thousands except share and per share data)**

	Year Ended December 31,					Period from February 4, 2002 (inception) to December 31, 2009
	2005	2006	2007	2008	2009	
<b>Statement of Operations Data:</b>						
Revenue:						
Research revenue	\$	\$	\$ 1,375	\$ 12,189	\$ 17,545	\$ 31,108
Collaboration revenue			409	2,778	46,813	50,000
Total revenue			1,784	14,967	64,358	81,108
Operating expenses:						
Research and development	13,652	33,630	31,074	37,764	48,081	175,722
General and administrative	6,877	12,277	15,278	19,666	19,973	77,709
Restructuring charges					1,522	1,522
Impairment of leasehold improvements						1,030
Depreciation and amortization	303	952	1,237	1,493	2,132	6,420
In-process research and development						418
Total operating expenses	20,832	46,859	47,589	58,923	71,708	262,821
Loss from operations	(20,832)	(46,859)	(45,805)	(43,956)	(7,350)	(181,713)
Other income (expenses):						
Interest income	610	1,990	5,135	4,819	997	13,757
Interest expense	(82)	(273)	(348)	(218)	(278)	(1,925)
Change in fair value of warrant liability	(280)	(23)	(149)			(454)
Other expense		(1,180)			64	(1,116)
Loss before tax benefit	(20,584)	(46,345)	(41,167)	(39,355)	(6,567)	(171,451)
Income tax benefit	612					695

Edgar Filing: AMICUS THERAPEUTICS INC - Form 10-K

Net loss	(19,972)	(46,345)	(41,167)	(39,355)	(6,567)	(170,756)
Deemed dividend		(19,424)				(19,424)
Preferred stock accretion	(139)	(159)	(351)			(802)

Net loss attributable to common stockholders	\$ (20,111)	\$ (65,928)	\$ (41,518)	\$ (39,355)	\$ (6,567)	(190,982)
--	-------------	-------------	-------------	-------------	------------	-----------

Net loss attributable to common stockholders per common share basic and diluted	\$ (49.02)	\$ (89.58)	\$ (3.14)	\$ (1.75)	\$ (0.29)	
---	------------	------------	-----------	-----------	-----------	--

Weighted-average common shares outstanding basic and diluted	410,220	735,967	13,235,755	22,493,803	22,624,134	
--	---------	---------	------------	------------	------------	--

	As of December 31,				
	2005	2006	2007	2008	2009
<b>Balance Sheet Data:</b>					
Cash and cash equivalents and marketable securities	\$ 24,418	\$ 54,699	\$ 161,527	\$ 121,124	\$ 78,224
Working capital	22,267	44,814	147,247	110,209	69,293
Total assets	28,670	59,645	167,097	128,773	85,370
Total liabilities	4,031	13,071	63,800	57,730	13,537
Redeemable convertible preferred stock	60,469	124,089			
Deficit accumulated during the development stage	(37,322)	(83,667)	(124,834)	(164,189)	(170,756)
Total stockholders (deficiency) equity	\$ (35,830)	\$ (77,515)	\$ 103,297	\$ 71,043	\$ 71,833

**Table of Contents**

**Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.**

**Overview**

Amicus Therapeutics, Inc. (Amicus) is a biopharmaceutical company focused on the discovery, development and commercialization of orally-administered, small molecule drugs known as pharmacological chaperones.

Pharmacological chaperones are a novel, first-in-class approach to treating a broad range of diseases including lysosomal storage disorders and diseases of neurodegeneration. Our goal is to become a leading biopharmaceutical company in these areas. Our current strategic priorities include the following:

the Phase 3 development of our lead product candidate, Amigal for Fabry disease;

the preclinical and clinical development of pharmacological chaperone/enzyme replacement therapy combination therapy; and

the preclinical evaluation of the use of pharmacological chaperones for diseases of neurodegeneration. Our novel approach to the treatment of human genetic diseases consists of using pharmacological chaperones that selectively bind to the target protein; increasing the stability of the protein and helping it fold into the correct three-dimensional shape. This allows proper trafficking of the protein within the cell, thereby increasing protein activity, improving cellular function and potentially reducing cell stress. We have also demonstrated in preclinical studies that pharmacological chaperones can further stabilize normal, or wild-type, proteins. This stabilization could lead to a higher percentage of the target proteins folding correctly and more stably, which can increase cellular levels of that target protein and improve cellular function, making chaperones potentially applicable to a wide range of diseases.

Our lead product candidate, Amigal (migalastat hydrochloride) for Fabry disease, is in Phase 3 development. Our other clinical stage product candidates are AT2220 (1-deoxynojirimycin HCl) for Pompe disease, which is currently in Phase 1 testing and remains on partial clinical hold, and Plicera (afegostat tartrate) for Gaucher disease, which we do not plan to advance into Phase 3 development at this time. We are conducting preclinical studies in diseases of neurodegeneration, including Parkinson's and Alzheimer's disease.

We have generated significant losses to date and expect to continue to generate losses as we continue the clinical development of our drug candidates, including Amigal and conduct preclinical studies on other programs. These activities are budgeted to expand over time and will require further resources if we are to be successful. From our inception in February 2002 through December 31, 2009, we have accumulated a deficit of \$170.8 million. As we have not yet generated commercial sales revenue from any of our product candidates, our losses will continue and are likely to be substantial over the next several years and we may need to obtain additional funds to further develop our research and development programs and product candidates.

In June 2007, we completed our initial public offering (IPO) of 5,000,000 shares of common stock at a public offering price of \$15.00 per share. Net cash proceeds from the initial public offering were approximately \$68.1 million after deducting underwriting discounts, commissions and offering expenses payable by us. In connection with the closing of the IPO, all of Amicus's shares of redeemable convertible preferred stock outstanding at the time of the offering were automatically converted into 16,112,721 shares of common stock.

In March 2010, we sold 4.95 million shares of our common stock and warrants to purchase 1.85 million shares of common stock in a registered direct offering to a select group of institutional investors. The shares of common stock and warrants were sold in units consisting of one share of common stock and one warrant to purchase 0.375 shares of common stock at a price of \$3.74 per unit. The warrants have a term of four years and are exercisable any time on or after the six month anniversary of the date they were issued, at an exercise price of \$4.43 per share. The net proceeds of the offering are expected to be approximately \$17.1 million after deducting the placement agency fee and all other estimated offering expenses.

***Collaboration with Shire Pharmaceuticals Ireland Ltd. (Shire)***

On November 7, 2007, we entered into a license and collaboration agreement with Shire. Under the agreement, Amicus and Shire were jointly developing Amicus's three lead pharmacological chaperone compounds for lysosomal

storage disorders: Amigal, Plicera and AT2220. We granted Shire the rights to commercialize these products outside the United States (U.S.) and retained all rights to our other programs and to develop and commercialize Amigal, Plicera and AT2220 in the U.S. In October 2009, the Company and Shire mutually agreed to terminate the collaboration agreement. For further information, see Note 11. Development and Commercialization Agreement with Shire.

**Table of Contents**

**Financial Operations Overview**

***Revenue***

In connection with our collaboration agreement with Shire, Shire paid us an initial, non-refundable license fee of \$50 million and reimbursed us for certain research and development costs associated with our lead clinical development programs. The license fee was classified as deferred revenue and was being recognized as Collaboration Revenue on a straight line basis over the period of the performance obligations. We also recognized any reimbursed research and development costs as Research Revenue. In October 2009, we mutually terminated our collaboration agreement with Shire and received a cash payment of \$5.2 million as full and final settlement of all amounts due under the collaboration agreement. This final payment was recorded as Research Revenue net of a cost sharing receivable. As a result of the termination of the agreement and as there were no further obligations under the original agreement, we recognized all previously deferred revenue as Collaboration Revenue in the fourth quarter of 2009. We have not generated any commercial sales revenue since our inception.

***Research and Development Expenses***

We expect our research and development expense to increase as we continue to develop our product candidates and explore new uses for our pharmacological chaperone technology. Research and development expense consists of:

- internal costs associated with our research and clinical development activities;
- payments we make to third party contract research organizations, contract manufacturers, investigative sites, and consultants;
- technology license costs;
- manufacturing development costs;
- personnel related expenses, including salaries, benefits, travel, and related costs for the personnel involved in drug discovery and development;
- activities relating to regulatory filings and the advancement of our product candidates through preclinical studies and clinical trials; and
- facilities and other allocated expenses, which include direct and allocated expenses for rent, facility maintenance, as well as laboratory and other supplies.

We have multiple research and development projects ongoing at any one time. We utilize our internal resources, employees and infrastructure across multiple projects. We record and maintain information regarding external, out-of-pocket research and development expenses on a project specific basis.

We expense research and development costs as incurred, including payments made to date under our license agreements. We believe that significant investment in product development is a competitive necessity and plan to continue these investments in order to realize the potential of our product candidates. From our inception in February 2002 through December 31, 2009, we have incurred research and development expense in the aggregate of \$175.7 million.



**Table of Contents**

The following table summarizes our principal product development projects through December 31, 2009, including the related stages of development for each project, and the out-of-pocket, third party expenses incurred with respect to each project (in thousands).

Projects	Years Ended December 31,			Period from
	2007	2008	2009	February 4, 2002 (Inception) to December 31, 2009
Projects				
Third party direct project expenses				
Amigal (Fabry Disease Phase 3)	\$ 4,648	\$ 4,410	\$ 8,634	\$ 34,074
Plicera (Gaucher Disease Phase 2*)	4,378	2,796	6,961	25,865
AT2220 (Pompe Disease Phase 1)	3,426	2,836	1,874	12,898
Diseases of Neurodegeneration (Preclinical)	620	1,801	3,194	5,615
Total third party direct project expenses	13,072	11,843	20,663	78,452
Other project costs <sup>(1)</sup>				
Personnel costs	9,720	14,535	18,801	57,766
Other costs <sup>(2)</sup>	8,282	11,386	8,617	39,504
Total other project costs	18,002	25,921	27,418	97,270
Total research and development costs	\$ 31,074	\$ 37,764	\$ 48,081	\$ 175,722

(1) Other project costs are leveraged across multiple clinical and preclinical projects.

(2) Other costs include facility, supply, overhead, and licensing costs that support multiple clinical and preclinical projects.

\* We do not plan to advance

Plicera into  
Phase 3  
development at  
this time.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of our product candidates. As a result, we are not able to reasonably estimate the period, if any, in which material net cash inflows may commence from our product candidates, including Amigal or any of our other preclinical product candidates. This uncertainty is due to the numerous risks and uncertainties associated with the conduct, duration and cost of clinical trials, which vary significantly over the life of a project as a result of evolving events during clinical development, including:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patients;
- the number of patients that ultimately participate in the trials;
- the results of our clinical trials; and
- any mandate by the U.S. Food and Drug Administration (FDA) or other regulatory authority to conduct clinical trials beyond those currently anticipated.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals, and the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on others. A change in the outcome of any of the foregoing variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development, regulatory approval and commercialization of that product candidate. For example, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those which we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Drug development may take several years and millions of dollars in development costs.

***General and Administrative Expense***

General and administrative expense consists primarily of salaries and other related costs, including stock-based compensation expense, for persons serving in our executive, finance, accounting, legal, information technology and human resource functions. Other general and administrative expense includes facility-related costs not otherwise included in research and development expense, promotional expenses, costs associated with industry and trade shows, and professional fees for legal services, including patent-related expense and accounting services. From our inception in February 2002 through December 31, 2009, we spent \$77.7 million on general and administrative expense.

## **Table of Contents**

### ***Interest Income and Interest Expense***

Interest income consists of interest earned on our cash and cash equivalents and marketable securities. Interest expense consists of interest incurred on our capital lease facility and our equipment financing agreement.

### ***Critical Accounting Policies and Significant Judgments and Estimates***

The discussion and analysis of our financial condition and results of operations are based on our financial statements, which we have prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. On an ongoing basis, we evaluate our estimates and judgments, including those described in greater detail below. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the following discussion represents our critical accounting policies.

### ***Revenue Recognition***

The Company recognizes revenue when amounts are realized or realizable and earned. Revenue is considered realizable and earned when the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the price is fixed or determinable; and (4) collection of the amounts due are reasonably assured.

In determining the accounting for collaboration agreements, the Company determines whether an arrangement involves multiple revenue-generating deliverables that should be accounted for as a single unit of accounting or divided into separate units of accounting for revenue recognition purposes. If this division is required, the arrangement consideration should be allocated among the separate units of accounting. If the arrangement represents a single unit of accounting, the revenue recognition policy and the performance obligation period must be determined (if not already contractually defined) for the entire arrangement. If the arrangement represents separate units of accounting according to the separation criteria, a revenue recognition policy must be determined for each unit. Revenues for non-refundable upfront license fee payments will be recognized on a straight line basis as Collaboration Revenue over the period of the performance obligations.

The revenue associated with reimbursements for research and development costs under collaboration agreements is included in Research Revenue and the costs associated with these reimbursable amounts are included in research and development expenses. The Company records these reimbursements as revenue and not as a reduction of research and development expenses as the Company has the risks and rewards as the principal in the research and development activities. Since the termination of the collaboration agreement with Shire in October 2009, the Company is not currently a party to any collaboration agreements.

### ***Accrued Expenses***

When we are required to estimate accrued expenses because we have not yet been invoiced or otherwise notified of actual cost, we identify services that have been performed on our behalf and estimate the level of service performed and the associated cost incurred. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us. Examples of estimated accrued expenses include:

- fees owed to contract research organizations in connection with preclinical and toxicology studies and clinical trials;
- fees owed to investigative sites in connection with clinical trials;
- fees owed to contract manufacturers in connection with the production of clinical trial materials;
- fees owed for professional services, and
- unpaid salaries, wages and benefits.

### ***Stock-Based Compensation***

Effective January 1, 2006, we adopted the fair value method of measuring stock-based compensation, which requires a public entity to measure the cost of employee services received in exchange for an award of equity instruments based

upon the grant-date fair value of the award. We chose the straight-line attribution method for allocating compensation costs and recognized the fair value of each stock option on a straight-line basis over the vesting period of the related awards.

**Table of Contents**

We recognized stock-based compensation expense of \$4.0 million, \$6.4 million, and \$7.8 million for the years ended 2007, 2008 and 2009, respectively. The following table summarizes information related to stock compensation expense recognized in the income statement (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
Stock compensation expense recognized in:			
Research and development expense	\$ 1.6	\$ 2.5	\$ 3.2
General and administrative expense	2.4	3.9	4.6
Total stock compensation expense	\$ 4.0	\$ 6.4	\$ 7.8

We use the Black-Scholes option pricing model when estimating the value for stock-based awards. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on a blended weighted average of historical information of our stock and the weighted average of historical information of similar public entities for which historical information was available. We will continue to use a blended weighted average approach using our own historical volatility and other similar public entity volatility information until our historical volatility is relevant to measure expected volatility for future option grants. The average expected life was determined using the mid-point between the vesting date and the end of the contractual term. The risk-free interest rate is based on U.S. Treasury, zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant. Forfeitures are estimated based on voluntary termination behavior, as well as a historical analysis of actual option forfeitures. The weighted average assumptions used in the Black-Scholes option pricing model are as follows:

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
Expected stock price volatility	78.3%	78.2%	80.6%
Risk free interest rate	4.5%	3.0%	2.4%
Expected life of options (years)	6.25	6.25	6.25
Expected annual dividend per share	\$ 0.00	\$ 0.00	\$ 0.00

The weighted-average grant-date fair value per share of options granted during 2007, 2008 and 2009 were \$9.45, \$7.36 and \$4.83, respectively.

Prior to becoming a public company, the exercise prices for options granted were set by our board of directors, based on its determination of the fair market value of our common stock at the time of the grants with input from our management. The members of our board of directors have extensive experience in the life sciences industry and all but one are non-employee directors. In connection with the IPO, we performed a retrospective determination of fair value for financial reporting purposes of our common stock underlying stock option grants in 2005, 2006 and through April 2007, utilizing a combination of valuation methods that are more fully described in our Form S-1/A (333-141700) that was declared effective by the SEC in May 2007.

**Basic and Diluted Net Loss Attributable to Common Stockholders per Common Share**

We calculated net loss per share as a measurement of the Company's performance while giving effect to all dilutive potential common shares that were outstanding during the reporting period. We had a net loss for all periods presented; accordingly, the inclusion of common stock options and warrants would be anti-dilutive. Therefore, the weighted average shares used to calculate both basic and diluted earnings per share are the same.

**Table of Contents**

The following table provides a reconciliation of the numerator and denominator used in computing basic and diluted net loss attributable to common stockholders per common share (in thousands except share amounts):

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Historical</b>			
Numerator:			
Net loss	\$ (41,167)	\$ (39,355)	\$ (6,567)
Accretion of redeemable convertible preferred stock	(351)		
Net loss attributable to common stockholders	\$ (41,518)	\$ (39,355)	\$ (6,567)
Denominator:			
Weighted average common shares outstanding basic and diluted	13,235,755	22,493,803	22,624,134

Dilutive common stock equivalents would include the dilutive effect of common stock options for common stock equivalents. Potentially dilutive common stock equivalents totaled approximately 2.4 million, 3.1 million and 4.8 million for the years ended December 31, 2007, 2008 and 2009, respectively. Potentially dilutive common stock equivalents were excluded from the diluted earnings per share denominator for all periods because of their anti-dilutive effect.

**Results of Operations*****Year Ended December 31, 2009 Compared to Year Ended December 31, 2008***

**Research and Development Expense.** Research and development expense was \$48.1 million in 2009 representing an increase of \$10.3 million or 27% from \$37.8 million in 2008. The variance was primarily attributable to higher personnel costs of \$4.3 million associated with headcount growth prior to the 2009 work force reduction, a \$5.5 million increase in contract manufacturing costs due to the timing of batch production and a \$2.5 million increase in contract research related to clinical trials.

**General and Administrative Expense.** General and administrative expense was \$20.0 million in 2009, an increase of \$0.3 million or 2% from \$19.7 million in 2008. The variance was primarily attributable to higher personnel costs related to stock compensation expense of \$0.6 million and an increase in rent of \$0.2 million related to additional office space obtained in 2009, partially offset by a reduction in consulting fees.

**Restructuring Charges.** Restructuring charges were \$1.5 million in 2009 due to the corporate restructuring implemented in the fourth quarter of 2009. This measure was intended to reduce costs and to align the Company's resources with its key strategic priorities. The restructuring charges included \$0.9 million for employment termination costs payable in cash and a facilities consolidation restructuring charge of \$0.6 million, consisting of lease payments of \$0.5 million related to the net present value of the net future minimum lease payments at the cease-use date and the write-down of the net book value of fixed assets in the vacated building of \$0.1 million.

**Depreciation and Amortization.** Depreciation and amortization expense was \$2.1 million in 2009, an increase of \$0.6 million or 40%, from \$1.5 million in 2008 due to assets acquired in 2009.

**Interest Income and Interest Expense.** Interest income was \$1.0 million in 2009, compared to \$4.8 million in 2008. The decrease of \$3.8 million or 79% was due to lower average cash and cash equivalents balances and the decline in interest rates. Interest expense was \$0.3 million in 2009, compared to \$0.2 million in 2008. The increase of \$0.1 million or 50% was due to the secured loan obtained in June 2009.

***Year Ended December 31, 2008 Compared to Year Ended December 31, 2007***

**Research and Development Expense.** Research and development expense was \$37.8 million in 2008 representing an increase of \$6.7 million or 22% from \$31.1 million in 2007. The variance was primarily attributable to higher personnel costs of \$4.8 million associated with headcount growth, a \$0.7 million increase in research supplies and a \$1.0 million increase in costs for travel and meetings primarily related to clinical studies, partially offset by a

reduction in contract research and manufacturing costs due to the timing of studies and manufacturing campaigns of \$0.7 million.

**Table of Contents**

*General and Administrative Expense.* General and administrative expense was \$19.7 million in 2008, an increase of \$4.4 million or 29% from \$15.3 million in 2007. The variance was primarily attributable to higher personnel costs of \$3.8 million associated with headcount growth and \$0.7 million of governance, insurance and compliance costs associated with being a public company, partially offset by a reduction in legal costs reflective of legal expenses associated with the collaboration agreement with Shire.

*Depreciation and Amortization.* Depreciation and amortization expense was \$1.5 million in 2008, an increase of \$0.3 million or 25%, from \$1.2 million in 2007 due to assets acquired in 2008.

*Interest Income and Interest Expense.* Interest income was \$4.8 million in 2008, compared to \$5.1 million in 2007. The decrease of \$0.3 million or 6% was due to lower average cash and cash equivalents balances and the decline in interest rates. Interest expense was \$0.2 million in 2008, compared to \$0.3 million in 2007. The decrease of \$0.1 million or 38% was due to the decrease in capital lease borrowings.

**Liquidity and Capital Resources****Source of Liquidity**

As a result of our significant research and development expenditures and the lack of any approved products to generate product sales revenue, we have not been profitable and have generated operating losses since we were incorporated in 2002. We have funded our operations principally with \$148.7 million of proceeds from redeemable convertible preferred stock offerings, \$75.0 million of gross proceeds from our IPO in June 2007 and \$50.0 million from the non-refundable license fee from the Shire collaboration agreement in November 2007. The following table summarizes our significant funding sources as of December 31, 2009:

<b>Funding</b> <sup>(2)</sup>	<b>Year</b>	<b>No. Shares</b>	<b>Approximate Amount</b> <sup>(1)</sup> <b>(in thousands)</b>
Series A Redeemable Convertible Preferred Stock	2002	444,443	\$ 2,500
Series B Redeemable Convertible Preferred Stock	2004, 2005, 2006, 2007	4,917,853	31,189
Series C Redeemable Convertible Preferred Stock	2005, 2006	5,820,020	54,999
Series D Redeemable Convertible Preferred Stock	2006, 2007	4,930,405	60,000
Common Stock	2007	5,000,000	75,000
Upfront License Fee from Shire	2007		50,000
		21,112,721	\$ 273,688

(1) Represents gross proceeds.

(2) The Series A, B, C and D Redeemable Convertible Preferred Stock was converted to common stock upon the effectiveness of our IPO.



In addition, in conjunction with the Shire collaboration agreement, we received reimbursement of research and development expenditures from the date of the agreement (November 7, 2007) through year-end 2009 of \$31.1 million. However, we will not receive any further reimbursement payments from Shire following the mutual termination of our collaboration agreement in October 2009.

As of December 31, 2009, we had cash and cash equivalents and marketable securities of \$78.2 million. We invest cash in excess of our immediate requirements with regard to liquidity and capital preservation in a variety of interest-bearing instruments, including obligations of U.S. government agencies and money market accounts. Wherever possible, we seek to minimize the potential effects of concentration and degrees of risk. Although we maintain cash balances with financial institutions in excess of insured limits, we do not anticipate any losses with respect to such cash balances.

In March 2010, we sold 4.95 million shares of our common stock and warrants to purchase 1.85 million shares of common stock in a registered direct offering to a select group of institutional investors. The shares of common stock and warrants were sold in units consisting of one share of common stock and one warrant to purchase 0.375 shares of common stock at a price of \$3.74 per unit. The warrants have a term of four years and are exercisable any time on or after the six month anniversary of the date they were issued, at an exercise price of \$4.43 per share. The net proceeds of the offering are expected to be approximately \$17.1 million after deducting the placement agency fee and all other estimated offering expenses.

**Table of Contents**

***Net Cash Used in Operating Activities***

Net cash used in operations for the year ended December 31, 2009 was \$43.4 million due primarily to the operating expenses for the year ended December 31, 2009 of \$71.7 million, partially offset by the reimbursed research and development costs of \$17.5 million.

Net cash used in operations for the year ended December 31, 2008 was \$36.9 million due primarily to the net loss for the year ended December 31, 2008 of \$39.3 million and the change in operating assets and liabilities of \$5.5 million. The change in operating assets and liabilities of \$5.5 million was due primarily to deferred revenue related to the collaboration agreement with Shire and lower accounts payable and accrued expenses at year-end 2008.

***Net Cash Provided by Investing Activities***

Net cash provided by investing activities for the year ended December 31, 2009 was \$31.9 million. Net cash provided by investing activities reflects \$131.8 million for the sale and redemption of marketable securities, offset by \$98.1 million for the purchase of marketable securities and \$1.8 million for the acquisition of property and equipment. Net cash provided by investing activities for the year ended December 31, 2008 was \$21.7 million. Net cash provided by investing activities reflects \$178.1 million for the sale and redemption of marketable securities, offset by \$153.7 million for the purchase of marketable securities and \$2.7 million for the acquisition of property and equipment.

***Net Cash Provided by and Used in Financing Activities***

Net cash provided by financing activities for the year ended December 31, 2009 was \$2.8 million and reflected the proceeds of our secured loan agreement of \$3.7 million and \$0.1 million of proceeds from the exercise of stock options, partially offset by the payments of our capital lease obligations and secured loan agreement of \$0.8 million and \$0.2 million, respectively.

Net cash used in financing activities for the year ended December 31, 2008 was \$1.0 million, consisting primarily of payments of equipment debt financing obligations of \$1.5 million offset by \$0.5 million proceeds from exercise of stock options and warrants.

***Funding Requirements***

We expect to incur losses from operations for the foreseeable future primarily due to research and development expenses, including expenses related to the hiring of personnel and conducting clinical trials, and greater general and administrative expenses resulting from expanding our finance and administrative staff, adding infrastructure, and incurring additional costs related to being a public company. Our future capital requirements will depend on a number of factors, including:

- the progress and results of our clinical trials of our drug candidates, including Amigal;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the number and development requirements of other product candidates that we pursue;
- the costs of commercialization activities, including product marketing, sales and distribution;
- the emergence of competing technologies and other adverse market developments;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property related claims;
- the extent to which we acquire or invest in businesses, products and technologies;

our ability to execute our operational and business plans and realize reductions in our expenses in line with our restructuring plan; and

our ability to establish collaborations and obtain milestone, royalty or other payments from any such collaborators.

We do not anticipate that we will generate revenue from commercial sales for at least the next several years, if at all. In the absence of additional funding, we expect our continuing operating losses to result in increases in our cash used in operations over the next several quarters and years. However, we believe that our existing cash and cash equivalents and short-term investments will be sufficient to enable us to fund our operating expenses and capital expenditure requirements at least until the second half of 2011.

**Table of Contents*****Financial Uncertainties Related to Potential Future Payments******Milestone Payments***

We have acquired rights to develop and commercialize our product candidates through licenses granted by various parties. While our license agreements for Amigal and AT2220 do not contain milestone payment obligations, two of these agreements related to Plicera do require us to make such payments if certain specified pre-commercialization events occur. Upon the satisfaction of certain milestones and assuming successful development of Plicera, we may be obligated, under the agreements that we have in place, to make future milestone payments aggregating up to approximately \$7.9 million. However, such potential milestone payments are subject to many uncertain variables that would cause such payments, if any, to vary in size.

***Royalties***

Under our license agreements, if we owe royalties on net sales for one of our products to more than one licensor, then we have the right to reduce the royalties owed to one licensor for royalties paid to another. The amount of royalties to be offset is generally limited in each license and can vary under each agreement. For Amigal and AT2220, we will owe royalties only to Mt. Sinai School of Medicine (MSSM). We would expect to pay royalties to all three licensors with respect to Plicera should we advance Plicera to commercialization. To date, we have not made any royalty payments on sales of our products and believe we are several years away from selling any products that would require us to make any such royalty payments.

On October 31, 2008, we amended and restated our license agreement with MSSM. The amended and restated agreement consolidated previous amendments into a single agreement, clarified the portion of royalties and milestone payments that we received from Shire that were payable to MSSM, and provided us with the sole right to control the prosecution of patent rights described in the amended and restated license agreement. Under the terms of the amended and restated license agreement, we agreed to pay MSSM \$2.6 million in connection with the \$50 million upfront payment that we received in November 2007, which was already accrued for at year-end 2007, and an additional \$2.6 million for the sole right to and control over the prosecution of patent rights.

Whether we will be obligated to make milestone or royalty payments in the future is subject to the success of our product development efforts and, accordingly, is inherently uncertain.

**Contractual Obligations**

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2009 and the effects such obligations are expected to have on our liquidity and cash flows in future periods (in thousands).

	<b>Total</b>	<b>Less than 1 Year</b>	<b>1-3 Years</b>	<b>3-5 Years</b>	<b>Over 5 Years</b>
Operating lease obligations	\$ 4,847	\$ 2,305	\$ 2,542		
Capital lease obligations	376	326	50		
Debt obligations	3,994	1,514	2,480		
Employment agreement	1,860	1,860			
Total fixed contractual obligations (1)	\$ 11,077	\$ 6,005	\$ 5,072		

(1) This table does not include  
(a) any milestone

payments which may become payable to third parties under license agreements as the timing and likelihood of such payments are not known, (b) any royalty payments to third parties as the amounts of such payments, timing and/or the likelihood of such payments are not known, (c) amounts, if any, that may be committed in the future to construct additional facilities, and (d) contracts that are entered into in the ordinary course of business which are not material in the aggregate in any period presented above.

We lease office and laboratory space in Cranbury, New Jersey and these leases will expire by their terms by February 2012. In 2008, we leased office and laboratory space in San Diego, CA and this lease will expire by its terms in September 2011.

In May 2009, the Company entered into a loan and security agreement with Silicon Valley Bank that provides for up to \$4 million of equipment financing through October 2012. Borrowings under the loan agreement are collateralized by equipment purchased with the proceeds of the loan and bear interest at a fixed rate of approximately 9%.

On December 30, 2008, we entered into an employment agreement with our president and chief executive officer that provides for an annual base salary, a cash bonus of up to 50% of base salary, an executive medical reimbursement contract, annual reimbursement up to \$220,000 for medical expenses not covered by the executive medical reimbursement contract or our medical or health insurance policies, and gross up for federal and state income taxes of income tax incurred in connection with medical reimbursement. The agreement will continue for successive one-year terms until either party provides written notice of termination to the other in accordance with the terms of the agreement. The cost of the executive medical reimbursement contract is estimated based on current premiums.



**Table of Contents**

We have entered into agreements with clinical research organizations and other outside contractors who are partially responsible for conducting and monitoring our clinical trials for our drug candidates including Amigal. These contractual obligations are not reflected in the table above because we may terminate them without penalty.

We have no other lines of credit or other committed sources of capital. To the extent our capital resources are insufficient to meet future capital requirements, we will need to raise additional capital or incur indebtedness to fund our operations. We cannot assure you that additional debt or equity financing will be available on acceptable terms, if at all.

**Off-Balance Sheet Arrangements**

We had no off-balance sheet arrangements as of December 31, 2008 and 2009.

**Recent Accounting Pronouncements**

In October 2009, the Financial Accounting Standards Board (FASB) issued guidance on revenue recognition related to multiple-element arrangements. This new guidance requires companies to allocate revenue in multiple-element arrangements based on an element's estimated selling price if vendor-specific or other third party evidence of value is not available. This guidance is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. Early adoption is permitted retrospectively from the beginning of an entity's fiscal year. The Company does not expect this will have a significant impact on the financial statements of the Company.

In June 2009, the FASB issued *The FASB Accounting Standards Codification* (the Codification), which became the source of U.S. generally accepted accounting principles to be applied to nongovernmental entities. The Codification superseded all existing non-SEC accounting and reporting standards and was effective for financial statements issued for interim and annual periods ending after September 15, 2009. Since it is not intended to change or alter existing U.S. GAAP, this pronouncement did not have any impact on the Company's financial statements.

In June 2009, the FASB issued guidance on the accounting for and disclosure of subsequent events. This guidance required application of the requirements to interim or annual financial periods ending after June 15, 2009. The adoption of this pronouncement did not have a material effect on the financial statements of the Company.

At its April 2009 Board meeting, the FASB issued guidance related to the reporting of financial instruments which included the following:

Guidance on the recognition of an Other Than Temporary Impairment and new disclosure requirements. The recognition and presentation provisions apply only to debt securities classified as available for sale and held to maturity.

Extension of the fair value disclosure requirements of the fair value of all financial instruments (recognized or unrecognized) to interim financial statements of publicly traded companies, when practicable to do so. These fair value disclosures must be presented together with the carrying amount of the financial instruments in a manner that clearly distinguishes between assets and liabilities and indicates how the carrying amounts relate to amounts reported on the balance sheet. An entity must also disclose the methods and significant assumptions used to estimate the fair value of the financial instruments.

Guidance on estimating fair value when the volume and level of activity for an asset or liability has significantly decreased in relation to normal market activity for the asset or liability.

The guidance listed above was effective for interim and annual periods ending after June 15, 2009. The adoption of these pronouncements did not have a material effect on the financial statements of the Company and the additional disclosures required are included in the financial statements of the Company for the period ended September 30, 2009.

**Table of Contents**

**Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

Market risk is the risk of change in fair value of a financial instrument due to changes in interest rates, equity prices, creditworthiness, financing, exchange rates or other factors. Our primary market risk exposure relates to changes in interest rates in our cash, cash equivalents and marketable securities. We place our investments in high-quality financial instruments, primarily money market funds, corporate debt securities, asset backed securities and U.S. government agency notes with maturities of less than one year, which we believe are subject to limited interest rate and credit risk. The securities in our investment portfolio are not leveraged, are classified as available-for-sale and, due to the short-term nature, are subject to minimal interest rate risk. We currently do not hedge interest rate exposure and consistent with our investment policy, we do not use derivative financial instruments in our investment portfolio. At December 31, 2009, we held \$78.2 million in cash, cash equivalents and available for sale securities and due to the short-term maturities of our investments, we do not believe that a 10% change in average interest rates would have a significant impact on our interest income. As December 31, 2009, our cash, cash equivalents and available for sale securities were all due on demand or within one year. Our outstanding debt has a fixed interest rate and therefore, we have no exposure to interest rate fluctuations.

We have operated primarily in the U.S., although we do conduct some clinical activities with vendors outside the U.S. While most expenses are paid in U.S. dollars, there are minimal payments made in local foreign currency. If exchange rates undergo a change of 10%, we do not believe that it would have a material impact on our results of operations or cash flows.



**Table of Contents**

**Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.**

**Management's Report on Consolidated Financial Statements and Internal Control over Financial Reporting**

The management of Amicus Therapeutics, Inc. has prepared, and is responsible for the Company's consolidated financial statements and related footnotes. These consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles.

We are responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of the Company's principal executive and principal financial officers and effected by the Company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of Amicus Therapeutics, Inc.;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of Amicus Therapeutics, Inc. are being made only in accordance with authorizations of management and directors of Amicus Therapeutics, Inc.; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the assets of Amicus Therapeutics, Inc. that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

We assessed the effectiveness of our internal control over financial reporting as of December 31, 2009. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on our assessment we believe that, as of December 31, 2009, our internal control over financial reporting is effective based on those criteria.

Dated March 10, 2010

/s/ John F. Crowley

/s/ John M. McAdam

Chairman, President and Chief Executive Officer

Vice President, Finance & Accounting

**Table of Contents**

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders

Amicus Therapeutics, Inc.

We have audited Amicus Therapeutics Inc.'s internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Amicus Therapeutics Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Amicus Therapeutics Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Amicus Therapeutics Inc. and subsidiary as of December 31, 2009 and 2008, and the related consolidated statements of operations, stockholders' (deficiency)/ equity, and cash flows for each of the three years in the period ended December 31, 2009, and the period from February 4, 2002 (inception) to December 31, 2009 and our report dated March 10, 2010 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

MetroPark, New Jersey  
March 10, 2010

**Table of Contents**

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders

Amicus Therapeutics Inc.

We have audited the accompanying consolidated balance sheets of Amicus Therapeutics Inc. and subsidiary (a development stage company) as of December 31, 2009 and 2008, and the related consolidated statements of operations, stockholders' (deficiency)/equity, and cash flows for each of the three years in the period ended December 31, 2009 and the period from February 4, 2002 (inception) to December 31, 2009. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Amicus Therapeutics, Inc. and subsidiary at December 31, 2009 and 2008, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2009 and the period from February 4, 2002 (inception) to December 31, 2009, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Amicus Therapeutics Inc.'s internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 10, 2010 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

MetroPark, New Jersey

March 10, 2010

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Consolidated Balance Sheets**  
**(in thousands, except share and per share amounts)**

	<b>December 31,</b>	
	<b>2008</b>	<b>2009</b>
<b>Assets:</b>		
Current assets:		
Cash and cash equivalents	\$ 28,073	\$ 19,339
Investments in marketable securities	93,051	58,885
Prepaid expenses and other current assets	2,463	2,262
<b>Total current assets</b>	<b>123,587</b>	<b>80,486</b>
Property and equipment, less accumulated depreciation and amortization of \$4,260 and \$6,340 at December 31, 2008 and 2009, respectively	4,919	4,399
Other non-current assets	267	485
<b>Total Assets</b>	<b>\$ 128,773</b>	<b>\$ 85,370</b>
 <b>Liabilities and Stockholders Equity</b>		
Current liabilities:		
Accounts payable and accrued expenses	\$ 8,796	\$ 9,635
Current portion of capital lease obligations	877	305
Current portion of deferred revenue	3,705	
Current portion of secured loan		1,253
<b>Total current liabilities</b>	<b>13,378</b>	<b>11,193</b>
Deferred revenue, less current portion	44,035	
Capital lease obligations, less current portion	317	48
Secured loan, less current portion		2,296
Commitments and contingencies		
Stockholders equity:		
Common stock, \$.01 par value, 50,000,000 shares authorized, 22,634,711 shares issued and outstanding at December 31, 2008, 50,000,000 shares authorized, 22,672,427 shares issued and outstanding at December 31, 2009	287	287
Additional paid-in capital	234,412	242,259
Accumulated other comprehensive income	533	43
Deficit accumulated during the development stage	(164,189)	(170,756)
<b>Total stockholders equity</b>	<b>71,043</b>	<b>71,833</b>
<b>Total Liabilities and Stockholders Equity</b>	<b>\$ 128,773</b>	<b>\$ 85,370</b>

*See accompanying notes to consolidated financial statements*

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Operations**  
**(in thousands, except share and per share amounts)**

	<b>Years Ended December 31,</b>			<b>Period from</b>
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>February 4,</b>
				<b>2002</b>
				<b>(Inception)</b>
				<b>to</b>
				<b>December</b>
				<b>31,</b>
				<b>2009</b>
Revenue:				
Research revenue	\$ 1,375	\$ 12,189	\$ 17,545	\$ 31,108
Collaboration revenue	409	2,778	46,813	50,000
Total revenue	1,784	14,967	64,358	81,108
Operating Expenses:				
Research and development	31,074	37,764	48,081	175,722
General and administrative	15,278	19,666	19,973	77,709
Restructuring charges			1,522	1,522
Impairment of leasehold improvements				1,030
Depreciation and amortization	1,237	1,493	2,132	6,420
In-process research and development				418
Total operating expenses	47,589	58,923	71,708	262,821
Loss from operations	(45,805)	(43,956)	(7,350)	(181,713)
Other income (expenses):				
Interest income	5,135	4,819	997	13,757
Interest expense	(348)	(218)	(278)	(1,925)
Change in fair value of warrant liability	(149)			(454)
Other income/(expense)			64	(1,116)
Loss before income tax benefit	(41,167)	(39,355)	(6,567)	(171,451)
Income tax benefit				695
Net loss	(41,167)	(39,355)	(6,567)	(170,756)
Deemed dividend				(19,424)
Preferred stock accretion	(351)			(802)

Edgar Filing: AMICUS THERAPEUTICS INC - Form 10-K

Net loss attributable to common stockholders	\$ (41,518)	\$ (39,355)	\$ (6,567)	\$ (190,982)
Net loss attributable to common stockholders per common share basic and diluted	\$ (3.14)	\$ (1.75)	\$ (0.29)	
Weighted-average common shares outstanding basic and diluted	13,235,755	22,493,803	22,624,134	

- 62 -

---

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Changes in Stockholders (Deficiency)/Equity**  
**Period from February 4, 2002 (inception) to December 31, 2002,**  
**and the seven year period ended December 31, 2009**  
**(in thousands, except share amounts)**

	<b>Common Stock</b>	<b>Additional Paid-In</b>	<b>Other Comprehensive</b>	<b>Deferred</b>	<b>Deficit Accumulated During the</b>	<b>Total Stockholders (Deficiency) Equity</b>
	<b>Shares</b>	<b>Amount</b>	<b>Capital</b>	<b>Gain/ (Loss)</b>	<b>Compensation</b>	<b>Stage</b>
Balance at February 4, 2002 (inception)		\$	\$	\$	\$	\$
Issuance of common stock to a consultant	74,938	6	78			84
Stock issued for in-process research and development	232,266	17	401			418
Deferred compensation			209		(209)	
Amortization of deferred compensation					27	27
Issuance of warrants with financing arrangements			8			8
Accretion of redeemable convertible preferred stock			(11)			(11)
Net loss						(1,775)
						(1,775)
Balance at December 31, 2002	307,204	23	685		(182)	(1,775)
Stock issued from exercise of stock options	333					
Deferred compensation			14		(14)	
Amortization of deferred compensation					70	70
Issuance of stock warrants with convertible notes			210			210
Issuance of stock options to consultants			4			4
Accretion of redeemable convertible preferred stock			(17)			(17)
Beneficial conversion feature related to bridge financing			41			41
Net loss						(6,768)
	307,537	23	937		(126)	(8,543)
						(7,709)



Edgar Filing: AMICUS THERAPEUTICS INC - Form 10-K

Balance at December 31, 2003								
Deferred compensation		68			(68)			
Amortization of deferred compensation					60			60
Issuance of stock options to consultants		16						16
Accretion of redeemable convertible preferred stock		(126)						(126)
Interest waived on converted convertible notes		193						193
Beneficial conversion feature related to bridge financing		95						95
Comprehensive Loss:								
Unrealized holding loss on available-for-sale securities				(9)				(9)
Net loss						(8,807)		(8,807)
Net total comprehensive loss								(8,816)
Balance at December 31, 2004	307,537	23	1,183	(9)	(134)	(17,350)		(16,287)
Stock issued from exercise of stock options	97,156	7	17					24
Stock issued from exercise of warrants	133,332	10	65					75
Deferred compensation			2,778		(2,778)			
Amortization of deferred compensation					365			365
Non-cash charge for stock options to consultants			112					112
Accretion of redeemable convertible preferred stock			(139)					(139)
Comprehensive Loss:								
Unrealized holding loss on available-for-sale securities				(7)				(7)
Net loss						(19,972)		(19,972)
Net total comprehensive loss								(19,979)
Balance at December 31, 2005	538,025	\$ 40	\$ 4,016	\$ (16)	\$ (2,547)	\$ (37,322)		\$ (35,829)

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Changes in Stockholders (Deficiency) Equity**  
**Period from February 4, 2002 (inception) to December 31, 2002,**  
**and the seven year period ended December 31, 2009**  
**(in thousands, except share amounts)**

	<b>Common Stock</b>		<b>Additional Paid-In</b>	<b>Other Comprehensive Gain/ (Loss)</b>	<b>Deferred Compensation</b>	<b>Deficit Accumulated During the Development Stage</b>	<b>Total Stockholders (Deficiency) Equity</b>
	<b>Shares</b>	<b>Amount</b>	<b>Capital</b>				
Balance at December 31, 2005	538,025	\$ 40	\$ 4,016	\$ (16)	\$ (2,547)	\$ (37,322)	\$ (35,829)
Stock issued from exercise of options	265,801	20	138				158
Stock issued for license payment	133,333	10	1,210				1,220
Reversal of deferred compensation upon adoption of FAS 123(R)			(2,547)		2,547		
Stock-based compensation	53,333		2,816				2,816
Issuance of stock options to consultants			476				476
Accretion of redeemable convertible preferred stock			(159)				(159)
Reclassification of warrant liability upon exercise of Series B redeemable convertible preferred stock warrants			117				117
Beneficial conversion on issuance of Series C redeemable convertible preferred stock			19,424				19,424
Beneficial conversion charge (deemed dividend) on issuance of Series C redeemable convertible preferred stock			(19,424)				(19,424)
Comprehensive (Loss)/Income:							
Unrealized holding gain on available-for-sale securities				31			31
Net loss						(46,345)	(46,345)
							(46,314)

Net total comprehensive  
loss

Balance at December 31, 2006	990,492	70	6,067	15	(83,667)	(77,515)
Stock issued from initial public offering	5,000,000	50	68,095			68,145
Stock issued from conversion of preferred shares	16,112,721	162	148,429			148,591
Stock issued from exercise of stock options, net	305,518	3	455			458
Stock based compensation			3,823			3,823
Issuance of stock options to consultants			162			162
Accretion of redeemable convertible preferred stock			(351)			(351)
Charge for warrant liability			758			758
Comprehensive (Loss)/ Income:						
Unrealized holding gain on available-for-sale securities				393		393
Net loss					(41,167)	(41,167)
Net total comprehensive loss						(40,774)
Balance at December 31, 2007	22,408,731	285	227,438	408	(124,834)	103,297
Stock issued from exercise of stock options, net	225,980	2	528			530
Stock based compensation			6,446			6,446
Comprehensive (Loss)/ Income:						
Unrealized holding gain on available-for-sale securities				125		125
Net loss					(39,355)	(39,355)
Net total comprehensive loss						(39,230)
Balance at December 31, 2008	22,634,711	\$ 287	\$ 234,412	\$ 533	\$ (164,189)	\$ 71,043

Table of Contents

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Changes in Stockholders (Deficiency) Equity**  
**Period from February 4, 2002 (inception) to December 31, 2002,**  
**and the seven year period ended December 31, 2009**  
**(in thousands, except share amounts)**

	<b>Common Stock</b>		<b>Additional</b>	<b>Other</b>	<b>Deferred</b>	<b>Deficit</b>	<b>Total</b>
	<b>Shares</b>	<b>Amount</b>	<b>Paid-In</b>	<b>Comprehensive</b>	<b>Compensation</b>	<b>Accumulated</b>	<b>Stockholders</b>
			<b>Capital</b>	<b>Gain/ (Loss)</b>	<b>Stage</b>	<b>During the</b>	<b>(Deficiency)</b>
						<b>Development</b>	<b>Equity</b>
Balance at December 31, 2008	22,634,711	\$ 287	\$ 234,412	\$ 533	\$	\$ (164,189)	\$ 71,043
Stock issued from exercise of stock options, net	37,716		60				60
Stock based compensation			7,787				7,787
Comprehensive (Loss)/ Income:							
Unrealized holding loss on available-for-sale securities				(490)			(490)
Net loss						(6,567)	(6,567)
Net total comprehensive loss							(7,057)
Balance at December 31, 2009	22,672,427	\$ 287	\$ 242,259	\$ 43	\$	\$ (170,756)	\$ 71,833

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Cash Flows**  
**(in thousands)**

	Years Ended December 31,			Period from
	2007	2008	2009	February 4, 2002
				(Inception) to December 31, 2009
<b>Operating activities</b>				
Net loss	\$ (41,167)	\$ (39,355)	\$ (6,567)	\$ (170,756)
Adjustments to reconcile net loss to net cash (used in)/provided by operating activities:				
Non-cash interest expense				525
Depreciation and amortization	1,237	1,493	2,132	6,417
Amortization of non-cash compensation				522
Stock-based compensation	3,823	6,446	7,787	20,873
Non-cash charge for stock based compensation issued to consultants	162			853
Change in fair value of warrant liability	149			454
Loss on disposal of asset		44	195	239
Stock-based license payment				1,220
Impairment of leasehold improvements				1,030
Non-cash charge for in process research and development				418
Beneficial conversion feature related to bridge financing				135
Changes in operating assets and liabilities:				
Prepaid expenses and other current assets	(1,192)	(949)	201	(2,262)
Other non-current assets			(218)	(506)
Account payable and accrued expenses	1,566	(1,669)	839	9,635
Deferred revenue	50,614	(2,873)	(47,740)	
Net cash provided by/(used in) operating activities	15,192	(36,863)	(43,371)	(131,203)
<b>Investing activities</b>				
Sale and redemption of marketable securities	126,370	178,100	131,848	479,014
Purchases of marketable securities	(200,743)	(153,687)	(98,173)	(537,974)
Purchases of property and equipment	(669)	(2,667)	(1,807)	(12,085)
Net cash (used in)/provided by investing activities	(75,042)	21,746	31,868	(71,045)
<b>Financing activities</b>				
	24,053			143,022

Edgar Filing: AMICUS THERAPEUTICS INC - Form 10-K

Proceeds from the issuance of preferred stock, net of issuance costs				
Proceeds from issuance of common stock, net of issuance costs	68,093			68,093
Proceeds from the issuance of convertible notes				5,000
Payments of capital lease obligations	(1,388)	(1,528)	(840)	(5,234)
Payments of secured loan agreement			(209)	(209)
Proceeds from exercise of stock options	510	530	60	1,282
Proceeds from exercise of warrants (common and preferred)	97			264
Proceeds from capital asset financing arrangement	546			5,611
Proceeds from secured loan agreement			3,758	3,758
Net cash provided by/(used in) financing activities	91,911	(998)	2,769	221,587
Net increase/(decrease) in cash and cash equivalents	32,061	(16,115)	(8,734)	19,339
Cash and cash equivalents at beginning of year/period	12,127	44,188	28,073	
Cash and cash equivalents at end of year/period	\$ 44,188	\$ 28,073	\$ 19,339	\$ 19,339
<b>Supplemental disclosures of cash flow information</b>				
Cash paid during the period for interest	\$ 348	\$ 218	\$ 250	\$ 1,604
<b>Non-cash activities</b>				
Conversion of preferred stock to common stock	\$ 148,591	\$	\$	148,951
Conversion of notes payable to Series B redeemable convertible preferred stock	\$	\$	\$	5,000
Accretion of redeemable convertible preferred stock	\$ 351	\$	\$	802
Beneficial conversion feature related to issuance of the additional issuance of Series C redeemable convertible preferred stock	\$	\$	\$	19,424

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements**

**1. Description of Business**

***Corporate Information, Status of Operations, and Management Plans***

Amicus Therapeutics, Inc. (the Company) was incorporated on February 4, 2002 in Delaware for the purpose of creating a premier drug development company at the forefront of therapy for human genetic diseases initially based on intellectual property in-licensed from Mount Sinai School of Medicine. The Company's activities since inception have consisted principally of raising capital, establishing facilities, and performing research and development. Accordingly, the Company is considered to be in the development stage.

In November 2007, the Company entered into a License and Collaboration Agreement with Shire Pharmaceuticals Ireland Ltd. (Shire). Under the agreement, the Company and Shire were jointly developing the Company's three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal (migalastat hydrochloride), Plicera (isofagomine tartrate) and AT2220 (1-deoxynojirimycin HCl). In October 2009, the Company and Shire mutually agreed to terminate the collaboration agreement. For further information, see Note 11. Development and Commercialization Agreement with Shire.

The Company had an accumulated deficit of approximately \$170.8 million at December 31, 2009 and anticipates incurring losses through the year 2010 and beyond. The Company has not yet generated commercial sales revenue and has been able to fund its operating losses to date through the sale of its redeemable convertible preferred stock, issuance of convertible notes, net proceeds from our initial public offering (IPO), payments from Shire during the term of the collaboration agreement and other financing arrangements. In March 2010, the Company sold 4.95 million shares of its common stock and warrants to purchase 1.85 million shares of common stock in a registered direct offering to a select group of institutional investors for net proceeds expected to be approximately \$17.1 million. The Company believes that its existing cash and cash equivalents and short-term investments will be sufficient to cover its cash flow requirements for 2010.

**2. Summary of Significant Accounting Policies**

***Basis of Presentation***

The accompanying consolidated financial statements have been prepared in accordance with United States (U.S.) generally accepted accounting principles (U.S. GAAP) and include all adjustments necessary for the fair presentation of the Company's financial position for the periods presented.

***Consolidation***

The financial statements include the accounts of Amicus Therapeutics, Inc. and its wholly owned subsidiary, Amicus Therapeutics UK Limited. All significant intercompany transactions and balances are eliminated in consolidation.

This subsidiary is not material to the overall financial statements of the Company.

***Use of Estimates***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

***Cash, Cash Equivalents and Marketable Securities***

The Company considers all highly liquid investments purchased with a maturity of three months or less at the date of acquisition, to be cash equivalents.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

Marketable securities consist of fixed income investments with a maturity of greater than three months and other highly liquid investments that can be readily purchased or sold using established markets. These investments are classified as available-for-sale and are reported at fair value on the Company's balance sheet. Unrealized holding gains and losses are reported within accumulated other comprehensive income/ (loss) as a separate component of stockholders' (deficiency) equity. Fair value is based on available market information including quoted market prices, broker or dealer quotations or other observable inputs. See Note 3. Cash, Cash Equivalents and Available-For-Sale Securities for a summary of available-for-sale securities as of December 31, 2009 and 2008.

***Concentration of Credit Risk***

The Company's financial instruments that are exposed to concentration of credit risk consist primarily of cash and cash equivalents and marketable securities. The Company maintains its cash and cash equivalents in bank accounts, which, at times, exceed federally insured limits. The Company invests its marketable securities in high-quality commercial financial instruments. The Company has not recognized any losses from credit risks on such accounts during any of the periods presented. The Company believes it is not exposed to significant credit risk on cash and cash equivalents or its marketable securities.

***Property and Equipment***

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation is calculated over the estimated useful lives of the respective assets, which range from three to five years, or the lesser of the related initial term of the lease or useful life for leasehold improvements. Assets under capital leases are amortized over the terms of the related leases or their estimated useful lives, whichever is shorter.

The initial cost of property and equipment consists of its purchase price and any directly attributable costs of bringing the asset to its working condition and location for its intended use. Expenditures incurred after the fixed assets have been put into operation, such as repairs and maintenance, are charged to income in the period in which the costs are incurred. Major replacements, improvements and additions are capitalized in accordance with Company policy.

***Impairment of Long-Lived Assets***

The Company performs a review of long-lived assets for impairment when events or changes in circumstances indicate the carrying value of such assets may not be recoverable. If an indication of impairment is present, the Company compares the estimated undiscounted future cash flows to be generated by the asset to its carrying amount. If the undiscounted future cash flows are less than the carrying amount of the asset, the Company records an impairment loss equal to the excess of the asset's carrying amount over its fair value. The fair value is determined based on valuation techniques such as a comparison to fair values of similar assets or using a discounted cash flow analysis. There were no impairment charges recognized during the years ended December 31, 2007, 2008 and 2009.

***Revenue Recognition***

The Company recognizes revenue when amounts are realized or realizable and earned. Revenue is considered realizable and earned when the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the price is fixed or determinable; and (4) collection of the amounts due are reasonably assured.

In determining the accounting for collaboration agreements, the Company determines whether an arrangement involves multiple revenue-generating deliverables that should be accounted for as a single unit of accounting or divided into separate units of accounting for revenue recognition purposes. If this division is required, the arrangement consideration should be allocated among the separate units of accounting. If the arrangement represents a single unit of accounting, the revenue recognition policy and the performance obligation period must be determined (if not already contractually defined) for the entire arrangement. If the arrangement represents separate units of accounting according to the separation criteria, a revenue recognition policy must be determined for each unit. Revenues for non-refundable upfront license fee payments will be recognized on a straight line basis as Collaboration Revenue over the period of the performance obligations.





**Table of Contents**

**Amicus Therapeutics, Inc.  
(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

The revenue associated with reimbursements for research and development costs under collaboration agreements is included in Research Revenue and the costs associated with these reimbursable amounts are included in research and development expenses. The Company records these reimbursements as revenue and not as a reduction of research and development expenses as the Company has the risks and rewards as the principal in the research and development activities.

***Research and Development Costs***

Research and development costs are expensed as incurred. Research and development expense consists primarily of costs related to personnel, including salaries and other personnel-related expenses, consulting fees and the cost of facilities and support services used in drug development. Assets acquired that are used for research and development and have no future alternative use are expensed as in-process research and development.

***Interest Income and Interest Expense***

Interest income consists of interest earned on the Company's cash and cash equivalents and marketable securities.

Interest expense consists of interest incurred on capital leases and secured debt.

***Other Income and Expenses***

Other income and expenses include costs directly attributable to a planned offering of its securities that were subsequently withdrawn during 2006 as well as a tax credit received from the Internal Revenue Service in 2009.

***Income Taxes***

The Company accounts for income taxes under the liability method. Under this method deferred income tax liabilities and assets are determined based on the difference between the financial statement carrying amounts and tax basis of assets and liabilities and for operating losses and tax credit carryforwards, using enacted tax rates in effect in the years in which the differences are expected to reverse. A valuation allowance is recorded if it is more likely than not that a portion or all of a deferred tax asset will not be realized.

***Other Comprehensive Income/ (Loss)***

Components of other comprehensive income/ (loss) include unrealized gains and losses on available-for-sale securities and are included in the statements of changes in stockholders' (deficiency) equity.

***Leases***

In the ordinary course of business, the Company enters into lease agreements for office space as well as leases for certain property and equipment. The leases have varying terms and expirations and have provisions to extend or renew the lease agreement, among other terms and conditions, as negotiated. Once the agreement is executed, the lease is assessed to determine whether the lease qualifies as a capital or operating lease.

When a non-cancelable operating lease includes any fixed escalation clauses and lease incentives for rent holidays or build-out contributions, rent expense is recognized on a straight-line basis over the initial term of the lease. The excess between the average rental amount charged to expense and amounts payable under the lease is recorded in accrued expenses.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

**Stock-Based Compensation**

At December 31, 2009, the Company had three stock-based employee compensation plans, which are described more fully in Note 6. Stockholders Equity. Until May 2007, the Company had one stock-based employee compensation plan. Stock-based employee compensation cost was recognized in the statement of operations for periods prior to January 1, 2006 to the extent options granted under the plan had an exercise price that was less than the fair market value of the underlying common stock on the date of grant. Effective January 1, 2006, The Company adopted the fair value method of measuring stock-based compensation, which requires a public entity to measure the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. Results for prior periods have not been restated.

The Company recognized stock-based compensation expense of \$4.0 million, \$6.4 million and \$7.8 million in 2007, 2008 and 2009, respectively. The following table summarizes information related to stock compensation expense recognized in the income statement (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
Stock compensation expense recognized in:			
Research and development expense	\$ 1.6	\$ 2.5	\$ 3.2
General and administrative expense	2.4	3.9	4.6
Total stock compensation expense	\$ 4.0	\$ 6.4	\$ 7.8

**Basic and Diluted Net Loss Attributable to Common Stockholders per Common Share**

The Company calculates net loss per share as a measurement of the Company's performance while giving effect to all dilutive potential common shares that were outstanding during the reporting period. The Company has a net loss for all periods presented; accordingly, the inclusion of common stock options would be anti-dilutive. Therefore, the weighted average shares used to calculate both basic and diluted earnings per share are the same.

The following table provides a reconciliation of the numerator and denominator used in computing basic and diluted net loss attributable to common stockholders per common share (in thousands except share amounts):

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Historical</b>			
Numerator:			
Net loss	\$ (41,167)	\$ (39,355)	\$ (6,567)
Accretion of redeemable convertible preferred stock	(351)		
Net loss attributable to common stockholders	\$ (41,518)	\$ (39,355)	\$ (6,567)
Denominator:			
Weighted average common shares outstanding basic and diluted	13,235,755	22,493,803	22,624,134

Dilutive common stock equivalents would include the dilutive effect of common stock options for common stock equivalents. Potentially dilutive common stock equivalents totaled approximately 2.4 million, 3.1 million and

4.8 million for the years ended December 31, 2007, 2008 and 2009, respectively. Potentially dilutive common stock equivalents were excluded from the diluted earnings per share denominator for all periods because of their anti-dilutive effect.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

***Dividends***

The Company has not paid cash dividends on its capital stock to date. The Company currently intends to retain its future earnings, if any, to fund the development and growth of the business and do not foresee payment of a dividend in any upcoming fiscal period.

***Recent Accounting Pronouncements***

In October 2009, the Financial Accounting Standards Board (FASB) issued guidance on revenue recognition related to multiple-element arrangements. This new guidance requires companies to allocate revenue in multiple-element arrangements based on an element's estimated selling price if vendor-specific or other third party evidence of value is not available. This guidance is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. Early adoption is permitted retrospectively from the beginning of an entity's fiscal year. The Company does not expect this will have a significant impact on the financial statements of the Company.

In June 2009, the FASB issued *The FASB Accounting Standards Codification* (the Codification), which became the source of U.S. generally accepted accounting principles to be applied to nongovernmental entities. The Codification superseded all existing non-SEC accounting and reporting standards and was effective for financial statements issued for interim and annual periods ending after September 15, 2009. Since it is not intended to change or alter existing U.S. GAAP, this pronouncement did not have any impact on the Company's financial statements.

In June 2009, the FASB issued guidance on the accounting for and disclosure of subsequent events. This guidance required application of the requirements to interim or annual financial periods ending after June 15, 2009. The adoption of this pronouncement did not have a material effect on the financial statements of the Company.

At its April 2009 Board meeting, the FASB issued guidance related to the reporting of financial instruments which included the following:

Guidance on the recognition of an Other Than Temporary Impairment and new disclosure requirements. The recognition and presentation provisions apply only to debt securities classified as available for sale and held to maturity.

Extension of the fair value disclosure requirements of the fair value of all financial instruments (recognized or unrecognized) to interim financial statements of publicly traded companies, when practicable to do so. These fair value disclosures must be presented together with the carrying amount of the financial instruments in a manner that clearly distinguishes between assets and liabilities and indicates how the carrying amounts relate to amounts reported on the balance sheet. An entity must also disclose the methods and significant assumptions used to estimate the fair value of the financial instruments.

Guidance on estimating fair value when the volume and level of activity for an asset or liability has significantly decreased in relation to normal market activity for the asset or liability.

The guidance listed above was effective for interim and annual periods ending after June 15, 2009. The adoption of these pronouncements did not have a material effect on the financial statements of the Company.

***Segment Information***

The Company currently operates in one business segment focusing on the development and commercialization of small molecule, orally administered therapies to treat a range of human genetic diseases. The Company is not organized by market and is managed and operated as one business. A single management team reports to the chief operating decision maker who comprehensively manages the entire business. The Company does not operate any separate lines of business or separate business entities with respect to its products. Accordingly, the Company does not accumulate discrete financial information with respect to separate service lines and does not have separately reportable segments.



**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

***Subsequent Events***

The Company evaluated events that occurred subsequent to December 31, 2009 and the following event is noted: On February 25, 2010, the Company announced that it entered into definitive agreements with a select group of institutional investors to sell 4.95 million shares of its common stock and warrants to purchase 1.85 million shares of its common stock in a registered direct offering. The shares of common stock and warrants were offered in units consisting of one share of common stock and one warrant to purchase 0.375 shares of common stock at a price of \$3.74 per unit. The warrants have a term of four years and are exercisable any time on or after the six month anniversary of the date they were issued, at an exercise price of \$4.43 per share. The gross proceeds of the offering were approximately \$18.5 million to the Company, net of placement agent fees and estimated offering expenses. Leerink Swann LLC served as lead manager and sole placement agent for the offering. These securities were offered by the Company pursuant to a registration statement previously filed and declared effective by the Securities and Exchange Commission and the transaction closed on March 2, 2010. The Company intends to use the net proceeds from the sale of the common stock and warrants for general corporate purposes and to further advance the development of the Company's lead product candidate, Amigal, including the initiation of the Phase 3 study to support registration in the European Union and the completion of certain activities required for the submission of a license application globally.

Except for the item noted above, there were no material recognized or non-recognized subsequent events during this period.

**3. Cash, Cash Equivalents and Available-for-Sale Investments**

As of December 31, 2009, the Company held \$19.3 million in cash and cash equivalents and \$58.9 million of available-for-sale investment securities which are reported at fair value on the Company's balance sheet. Unrealized holding gains and losses are reported within accumulated other comprehensive income/(loss) as a separate component of stockholders' equity. If a decline in the fair value of a marketable security below the Company's cost basis is determined to be other than temporary, such marketable security is written down to its estimated fair value as a new cost basis and the amount of the write-down is included in earnings as an impairment charge. To date, only temporary impairment adjustments have been recorded.

Consistent with the Company's investment policy, the Company does not use derivative financial instruments in its investment portfolio. The Company regularly invests excess operating cash in deposits with major financial institutions, money market funds, notes issued by the U.S. government, as well as fixed income investments and U.S. bond funds both of which can be readily purchased and sold using established markets. The Company believes that the market risk arising from its holdings of these financial instruments is mitigated as many of these securities are either government backed or of the highest credit rating.

The Company's investment portfolio has not been materially adversely impacted by the recent disruption in the credit markets. However, if there is continued and expanded disruption in the credit markets, there can be no assurance that the Company's investment portfolio will not be adversely affected in the future.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

Cash and available for sale securities consisted of the following as of December 31, 2008 and December 31, 2009:

	Cost	As of December 31, 2008		Fair Value
		Unrealized Gain	Unrealized Loss	
Cash balances	\$ 3,457	\$	\$	\$ 3,457
Money market fund	24,616			24,616
Commercial paper	22,343	104		22,447
U.S. government agency securities	58,341	449		58,790
Asset-based securities	7,251		(34)	7,217
Corporate debt securities	4,583	17	(3)	4,597
	\$ 120,591	\$ 570	\$ (37)	\$ 121,124
Included in cash and cash equivalents	\$ 28,073	\$	\$	\$ 28,073
Included in marketable securities	92,518	570	(37)	93,051
Total cash and available for sale securities	\$ 120,591	\$ 570	\$ (37)	\$ 121,124

	Cost	As of December 31, 2009		Fair Value
		Unrealized Gain	Unrealized Loss	
Cash balances	\$ 19,339	\$	\$	\$ 19,339
U.S. government agency securities	45,020	44	(1)	45,063
Corporate debt securities	8,951	4	(7)	8,948
Commercial paper	4,521	3		4,524
Certificate of deposit	350			350
	\$ 78,181	\$ 51	\$ (8)	\$ 78,224
Included in cash and cash equivalents	\$ 19,339	\$	\$	\$ 19,339
Included in marketable securities	58,842	51	(8)	58,885
Total cash and available for sale securities	\$ 78,181	\$ 51	\$ (8)	\$ 78,224

All of the Company's available for sale investments as of December 31, 2008 and December 31, 2009 are due in one year or less.

Unrealized gains and losses are reported as a component of accumulated other comprehensive gain/loss in stockholders' equity. For the year ended December 31, 2008, unrealized holding gains included in accumulated other comprehensive income was \$0.1 million. For the year ended December 31, 2009, unrealized holding gains included in accumulated other comprehensive income was \$0.5 million.

For the years ended December 31, 2008 and 2009, there were no realized gains or losses. The cost of securities sold is based on the specific identification method.





**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

Unrealized loss positions in the available for sale securities as of December 31, 2008 and December 31, 2009 reflect temporary impairments that have not been recognized and have been in a loss position for less than twelve months. The fair value of these available for sale securities in unrealized loss positions was \$8.9 million and \$7.8 million as of December 31, 2008 and December 31, 2009, respectively.

The Company classifies its investments at fair value in one of the following three categories:

*Level 1* Quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

*Level 2* Inputs other than quoted prices in active markets that are observable for the asset or liability, either directly or indirectly.

*Level 3* Inputs that are unobservable for the asset or liability.

The Company's available for sale investment securities are classified within Level 1 or Level 2 of the fair value hierarchy. These investment securities are valued using quoted market prices, broker or dealer quotations or other observable inputs. A summary of the fair value of the Company's available for sale investment securities (allocated by Level) as of December 31, 2009 are identified in the following table (in thousands):

	<b>Level 1</b>	<b>Level 2</b>	<b>Total</b>
Cash/Money market funds	\$ 19,339	\$	\$ 19,339
U.S. government agency securities		45,063	45,063
Corporate debt securities		8,948	8,948
Commercial paper		4,524	4,524
Certificate of deposit		350	350
	\$ 19,339	\$ 58,885	\$ 78,224

**4. Property and Equipment**

Property and equipment consist of the following (in thousands):

	<b>December 31,</b>	
	<b>2008</b>	<b>2009</b>
Property and equipment consist of the following:		
Computer equipment	\$ 1,322	\$ 2,052
Computer software	996	1,102
Research equipment	4,096	4,737
Furniture and fixtures	657	703
Leasehold improvements	2,108	2,145
	9,179	10,739
Less accumulated depreciation and amortization	(4,260)	(6,340)
	\$ 4,919	\$ 4,399

Included in property and equipment are costs capitalized pursuant to capital lease obligations of \$5.4 million and \$9.2 million at December 31, 2008 and December 31, 2009, respectively. Depreciation and amortization expense

relating to the capital lease obligations was \$1.1 million, \$1.1 million, \$1.9 million and \$5.0 million for the years ended December 31, 2007, 2008, and 2009, and for the Period February 4, 2002 (inception) to December 31, 2009, respectively.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

**5. Accounts Payable and Accrued Expenses**

Accrued expenses consist of the following (in thousands):

	<b>December 31,</b>	
	<b>2008</b>	<b>2009</b>
Accounts payable	\$ 1,987	\$ 3,837
Accrued professional fees	283	411
Accrued contract manufacturing & contract research costs	2,985	1,901
Accrued compensation and benefits	2,846	2,557
Accrued facility costs	281	753
Accrued other	414	176
	\$ 8,796	\$ 9,635

**6. Stockholders Equity****Common Stock**

As of December 31, 2009, the Company was authorized to issue 50,000,000 shares of common stock. Dividends on common stock will be paid when, and if declared by the board of directors. Each holder of common stock is entitled to vote on all matters and is entitled to one vote for each share held.

**Stock Option Plans**

In April 2002, the Company's Board of Directors and shareholders approved the Company's 2002 Stock Option Plan (the 2002 Plan). In May 2007, the Company's Board of Directors and shareholders approved the Company's 2007 Stock Option Plan (the 2007 Plan) and 2007 Director Option Plan (the 2007 Director Plan). In June 2008, the Company's Board of Directors and shareholders approved amendments to the 2007 Plan. Both the 2002 Plan and 2007 Plan provide for the granting of restricted stock and options to purchase common stock in the Company to employees, advisors and consultants at a price to be determined by the Company's board of directors. The 2002 Plan and the 2007 Plan are intended to encourage ownership of stock by employees and consultants of the Company and to provide additional incentives for them to promote the success of the Company's business. The Options may be incentive stock options (ISOs) or non-statutory stock options (NSOs). Under the provisions of each plan, no option will have a term in excess of 10 years. The 2007 Director Plan is intended to promote the recruiting and retention of highly qualified eligible directors and strengthen the commonality of interest between directors and stockholders by encouraging ownership of common stock of the Company. The options granted under the 2007 Director Plan are NSOs and under the provisions of this plan, no option will have a term in excess of 10 years.

The Board of Directors, or its committee, is responsible for determining the individuals to be granted options, the number of options each individual will receive, the option price per share, and the exercise period of each option. Options granted pursuant to both the 2002 Plan and the 2007 Plan generally vest 25% on the first year anniversary date of grant plus an additional 1/48th for each month thereafter and may be exercised in whole or in part for 100% of the shares vested at any time after the date of grant. Options under the 2007 Director Plan are granted at the annual meeting of stockholders and vest on the date of the annual meeting of stockholders of the Company in the year following the year during which the options were automatically granted.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

As of December 31, 2009, there were no shares reserved for issuance under the 2002 Plan. The Company has reserved up to 269,556 shares for issuance under the 2007 Plan and the 2007 Director Plan.

The Company recognized stock-based compensation expense of \$4.0 million, \$6.4 million and \$7.8 million in 2007, 2008 and 2009, respectively. The following table summarizes information related to stock compensation expense recognized in the income statement (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
Stock compensation expense recognized in:			
Research and development expense	\$ 1.6	\$ 2.5	\$ 3.2
General and administrative expense	2.4	3.9	4.6
Total stock compensation expense	\$ 4.0	\$ 6.4	\$ 7.8

Effective January 1, 2006, the Company adopted the fair value method of measuring stock-based compensation, which requires a public entity to measure the cost of employee services received in exchange for an award of equity instruments based upon the grant-date fair value of the award. The Company chose the straight-line attribution method for allocating compensation costs and recognized the fair value of each stock option on a straight-line basis over the vesting period of the related awards.

The Company uses the Black-Scholes option pricing model when estimating the fair value for stock-based awards. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on a blended weighted average of historical information of the Company's stock and the weighted average of historical information of similar public entities for which historical information was available. The Company will continue to use a blended weighted average approach using its own historical volatility and other similar public entity volatility information until the Company's historical volatility is relevant to measure expected volatility for future option grants. The average expected life was determined using the mid-point between the vesting date and the end of the contractual term. The risk-free interest rate is based on U.S. Treasury, zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant. Forfeitures are estimated based on voluntary termination behavior, as well as a historical analysis of actual option forfeitures.

The weighted average assumptions used in the Black-Scholes option pricing model are as follows:

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
Expected stock price volatility	78.3%	78.2%	80.6%
Risk free interest rate	4.5%	3.0%	2.4%
Expected life of options (years)	6.25	6.25	6.25
Expected annual dividend per share	\$ 0.00	\$ 0.00	\$ 0.00

The weighted-average grant-date fair value per share of options granted during 2007, 2008 and 2009 were \$9.45, \$7.36 and \$4.83, respectively.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

The following table summarizes information about stock options outstanding:

	Number of Shares (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (in millions)
Options outstanding, December 31, 2006	1,868.4	\$ 4.27		
Granted	1,035.6	\$ 13.16		
Exercised	(308.6)	\$ 1.80		
Forfeited	(152.2)	\$ 8.94		
Options outstanding, December 31, 2007	2,443.2	\$ 8.08		
Granted	965.2	\$ 10.49		
Exercised	(225.1)	\$ 2.48		
Forfeited	(106.0)	\$ 9.69		
Options outstanding, December 31, 2008	3,077.3	\$ 9.19		
Granted	2,352.0	\$ 6.88		
Exercised	(40.4)	\$ 2.03		
Forfeited	(570.0)	\$ 10.15		
Options outstanding, December 31, 2009	4,818.9	\$ 8.01	8.1 years	\$ 0.4
Vested and unvested expected to vest, December 31, 2009	4,495.0	\$ 8.10	8.0 years	\$ 0.4
Exercisable at December 31, 2009	1,983.8	\$ 8.41	6.5 years	\$ 0.4

The aggregate intrinsic value of options exercised during the years ended December 31, 2007, 2008 and 2009, was \$2.7 million, \$1.9 million and \$0.1 million, respectively. As of December 31, 2009, the total unrecognized compensation cost related to non-vested stock options granted was \$12.1 million and is expected to be recognized over a weighted average period of 2.9 years. Cash proceeds from stock options exercised during the years ended December 31, 2007, 2008 and 2009 were \$0.5 million, \$0.6 million and \$0.1 million, respectively.

*Restricted Stock Awards* Restricted stock awards are granted subject to certain restrictions, including in some cases service conditions (restricted stock). The grant-date fair value of restricted stock awards, which has been determined based upon the market value of the Company's shares on the grant date, is expensed over the vesting period.



**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

The following table summarizes information on the Company's restricted stock:

	<b>Number of Shares (in thousands)</b>	<b>Restricted Stock Weighted Average Grant Date Fair Value</b>
Unvested at December 31, 2007	35.0	\$ 8.96
Granted		\$
Vested	(14.4)	\$ 8.85
Forfeited		\$
Unvested at December 31, 2008	20.6	\$ 9.04
Granted		\$
Vested	(12.2)	\$ 8.97
Forfeited		\$
Unvested at December 31, 2009	8.4	\$ 9.15

Upon vesting in 2009, 2,640 shares were surrendered to fund minimum statutory tax withholding requirements. There were no restricted stock awards in 2009, 2008 or 2007. As of December 31, 2009, the total unrecognized compensation cost related to unvested restricted stock awards was \$0.1 million. This cost is expected to be recognized over a weighted average period of 0.75 years. The total fair value of restricted stock awards which vested during 2009 was \$0.1 million.

**7. 401(k) Plan**

The Company has a 401(k) plan (the Plan) covering all eligible employees and through December 31, 2007, the Company had not made any match of employee contributions. During 2007, the Board of Directors approved a company matching program that began on January 1, 2008. The matching program allows for a company match of up to 5% of salary and bonus paid during the year. The match vests 25% per year on a cliff vesting schedule over the first four years of employment for each participant. The Company's total contribution to the Plan was \$0.5 million and \$0.6 million for the years ended December 31, 2008 and 2009, respectively.

**8. Leases****Operating Leases**

The Company leases its facilities in Cranbury, NJ and these leases will expire in February 2012 or on such earlier date upon mutual agreement of both parties. In 2008, the Company entered into a lease agreement for its laboratory and office space in San Diego, CA, which will expire in September 2011.

At December 31, 2009, aggregate annual future minimum lease payments under these leases are as follows (in thousands):

Operating Leases	
Years ending December 31:	
2010	\$ 2,305



2011	2,222
2012	320
2013	
2014	
	\$ 4,847

Rent expense for the years ended December 31, 2007, 2008 and 2009 were \$1.8 million, \$2.0 million and \$2.5 million, respectively.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

**Capital Lease Facilities**

In August 2002, the Company entered into financing agreements that provides for up to \$1 million of equipment financing through August 2004. The facility was increased to \$3 million in May of 2005 and to \$5 million in November 2006. These financing arrangements include interest of approximately 9-12%, and lease terms of up to 48 months. Eligible assets under the lease lines include laboratory and scientific equipment, computer hardware and software, general office equipment, furniture, and leasehold improvements.

The remaining future minimum payments due for all non-cancelable capital leases as of December 31, 2009 are as follows (in thousands):

## Capital Leases

Years ending December 31:

2010	\$	326
2011		50
2012		
2013		
		376
Less payments for interest		(23)
Total principal obligation		353
Less short-term portion		(305)
		48
Long-term portion	\$	48

The capital lease obligation is secured by the related assets financed by the leases.

**9. Income Taxes**

In June 2006, the FASB issued a single model to address accounting for uncertainty in tax positions. The model clarifies the accounting for income taxes, by prescribing a minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. It also provides guidance on de-recognition, measurement, and classification of amounts relating to uncertain tax positions, accounting for and disclosure of interest and penalties, accounting in interim periods and disclosures required. The Company adopted the FASB requirements as of January 1, 2007 and determined that it did not have a material impact on the Company's financial position and results of operations. The Company did not recognize interest or penalties related to income tax during the period ended December 31, 2009 and did not accrue for interest or penalties as of December 31, 2009. The Company does not have an accrual for uncertain tax positions as of December 31, 2009. Tax returns for all years 2005 and thereafter are subject to future examination by tax authorities.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

Deferred income taxes reflect the net effect of temporary difference between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The significant components of the deferred tax assets and liabilities are as follows (in thousands):

	<b>For Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
Current deferred tax asset			
Non-cash stock issue	\$ 283	\$ 1,560	\$ 3,201
Others	1,232	141	229
	1,515	1,701	3,430
Non-current deferred tax assets			
Amortization/depreciation	1,129	2,682	3,271
Research tax credit	5,403	7,294	11,695
Net operating loss carry forwards	42,282	36,196	54,055
Deferred revenue		19,096	
Others	478	518	257
Total deferred tax asset	50,807	67,487	72,708
Non-current deferred tax liability			
Total net deferred tax asset	50,807	67,487	72,708
Less valuation allowance	(50,807)	(67,487)	(72,708)
Net deferred tax asset	\$	\$	\$

The Company records a valuation allowance for temporary differences for which it is more likely than not that the Company will not receive future tax benefits. At December 31, 2007, 2008, and 2009, the Company recorded valuation allowances of \$50.8 million, \$67.5 million and \$72.7 million, respectively, representing a change in the valuation allowance of \$16.7 million and \$5.2 million for the two previous fiscal year-ends, due to the uncertainty regarding the realization of such deferred tax assets, to offset the benefits of net operating losses generated during those years.

As of December 31, 2009, the Company had federal and state net operating loss carry forwards of approximately \$136 million and \$133 million, respectively. The federal carry forward will begin to expire in 2025 and will end in 2029. The state carry forward will begin to expire in 2013 and will end in 2016.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

A reconciliation of the statutory tax rates and the effective tax rates for the years ended December 31, 2007, 2008 and 2009 are as follows:

	Years Ended December 31,		
	2007	2008	2009
Statutory rate	(34)%	(34)%	(34)%
State taxes, net of federal benefit	(5)	(5)	(3)
Permanent adjustments	3	2	19
R&D credit	(4)	(5)	(66)
Other	(1)		4
Valuation allowance	41	42	80
Net	0%	0%	0%

There was a federal benefit in 2009 from refundable research credits of approximately \$0.1 million and no income tax benefit recorded for the years ended December 31, 2007 or 2008.

**10. Licenses**

The Company acquired rights to develop and commercialize its product candidates through licenses granted by various parties. The following summarizes the Company's material rights and obligations under those licenses:

*Mt. Sinai School of Medicine of New York University (MSSM)* The Company acquired exclusive worldwide patent rights to develop and commercialize Amigal, Plicera and AT2220 and other pharmacological chaperones for the prevention or treatment of human diseases or clinical conditions by increasing the activity of wild-type and mutant enzymes pursuant to a license agreement with MSSM. In connection with this agreement, the Company issued 232,266 shares of common stock to MSSM in April 2002. In 2006, the Company amended its license agreement with MSSM to expand its exclusive worldwide patent rights to develop and commercialize pharmacological chaperones. In connection with the amendment, the Company paid \$1.0 million and issued 133,333 shares of its common stock with an estimated fair value of \$1.2 million to MSSM. In total, the Company recorded \$2.2 million of research and development expense in connection with the amendment in 2006. This agreement expires upon expiration of the last of the licensed patent rights, which will be in 2019, subject to any patent term extension that may be granted, or 2024 if we develop a product for combination therapy (pharmacological chaperone plus ERT) and a patent issues from the pending application covering combination therapy, subject to any patent term extension that may be granted. Under this agreement, to date the Company has paid no upfront or annual license fees and has no milestone or future payments other than royalties on net sales. On October 31, 2008, the Company amended and restated its license agreement with MSSM which consolidated previous amendments into a single agreement, clarified the portion of royalties and milestone payments the Company received from Shire that were payable to MSSM, and provided the Company with the sole right to control the prosecution of patent rights described in the amended and restated license agreement. Under the terms of the amended and restated license agreement, the Company agreed to pay \$2.6 million to MSSM in connection with the \$50 million upfront payment that the Company received from Shire in November 2007, which was already accrued for at December 31, 2007 and an additional \$2.6 million paid in the fourth quarter of 2008 for the sole right to and control over the prosecution of patent rights.

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

*University of Maryland, Baltimore County* The Company acquired exclusive U.S. patent rights to develop and commercialize Plicera for the treatment of Gaucher disease from the University of Maryland, Baltimore County. Under this agreement, the Company paid upfront and annual license fees of \$45 thousand, which were expensed as research and development expense. The Company is required to make a milestone payment upon the demonstration of safety and efficacy of Plicera for the treatment of Gaucher disease in a Phase 2 study, and another payment upon receiving FDA approval for Plicera for the treatment of Gaucher disease. Upon satisfaction of both milestones, the Company could be required to make up to \$0.2 million in aggregate payments. The Company is also required to pay royalties on net sales. This agreement expires upon expiration of the last of the licensed patent rights in 2015.

*Novo Nordisk A/S* The Company acquired exclusive patent rights to develop and commercialize Plicera for all human indications. Under this agreement, to date the Company paid \$0.4 million in license fees which were expensed as research and development expense. The Company is also required to make milestone payments based on clinical progress of Plicera, with a payment due after initiation of a Phase 3 clinical trial for Plicera for the treatment of Gaucher disease, and a payment due upon each filing for regulatory approval of Plicera for the treatment of Gaucher disease in any of the US, Europe or Japan. An additional payment is due upon approval of Plicera for the treatment of Gaucher disease in the U.S. and a payment is also due upon each approval of Plicera for the treatment of Gaucher disease in either Europe or Japan. Assuming successful development of Plicera for the treatment of Gaucher disease in the U.S., Europe and Japan, total milestone payments would be \$7.8 million. The Company is also required to pay royalties on net sales. This license will terminate in 2016.

Under its license agreements, if the Company owes royalties on net sales for one of its products to more than one of the above licensors, then it has the right to reduce the royalties owed to one licensor for royalties paid to another. The amount of royalties to be offset is generally limited in each license and can vary under each agreement. For Amigal and AT2220, the Company will owe royalties only to MSSM and will owe no milestone payments. The Company would expect to pay royalties to all three licensors with respect to Plicera should we advance it to commercialization. The Company's rights with respect to these agreements to develop and commercialize Amigal, Plicera and AT2220 may terminate, in whole or in part, if the Company fails to meet certain development or commercialization requirements or if the Company does not meet its obligations to make royalty payments.

**11. Development and Commercialization Agreement with Shire**

In November 2007, the Company entered into a License and Collaboration Agreement with Shire. Under the agreement, the Company and Shire were jointly developing the Company's three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal, Plicera and AT2220. The Company granted Shire the rights to commercialize these products outside the U.S. and retained all rights to its other programs and to develop and commercialize Amigal, Plicera and AT2220 in the U.S.

The Company received an initial, non-refundable license fee payment of \$50 million from Shire. Joint development costs toward global approval of the three compounds were being shared 50/50. In addition, the Company was eligible to receive milestone payments if certain clinical and regulatory and sales-based milestones were met. The Company was also eligible to receive tiered double-digit royalties on net sales of the products marketed outside of the U.S. As noted in Note 1. Description of Business, on October 29, 2009, the Company and Shire agreed to mutually terminate the collaboration agreement upon concluding that it was in their respective best interests to no longer collaborate on the development of the Company's three lead pharmacological chaperone compounds for the treatment of lysosomal storage disorders. As a result of this termination, Amicus has reacquired all global development and commercialization rights from Shire for these lead programs and now owns worldwide rights to them. Shire paid the Company \$5.2 million as full and final payment for amounts due to the Company under the collaboration agreement, and both parties are relieved of all other future obligations thereunder, financial or otherwise.



**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

The Company had previously determined that its various deliverables due under the collaboration agreement represent a single unit of accounting for revenue recognition purposes. The initial, non-refundable upfront license fee payment of \$50 million was being recognized on a straight line basis as Collaboration Revenue over the period of the performance obligations. The Company had determined that the period of performance obligations was 18 years as contractually defined.

Due to the termination of our collaborative agreement, all future deliverables under this collaboration agreement were cancelled. As a result, during the fourth quarter of 2009, the Company recognized as Collaboration Revenue the remaining balance of deferred revenue of \$44.7 million of the upfront payment from Shire. Additionally, the Company recognized \$4.7 million of the termination payment as Research Revenue in the fourth quarter of 2009 as full and fair settlement of all development cost sharing obligations through the date of the mutual termination agreement.

**12. Short-Term Borrowings and Long-Term Debt**

In May 2009, the Company entered into a loan and security agreement with Silicon Valley Bank that provides for up to \$4 million of equipment financing through October 2012. Borrowings under the loan agreement are collateralized by equipment purchased with the proceeds of the loan and bear interest at a fixed rate of approximately 9%. The loan agreement contains customary terms and conditions, including a financial covenant whereby the Company must maintain a minimum amount of liquidity measured at the end of each month equal to the greater of (i) \$30 million of unrestricted cash, cash equivalents, and marketable securities, or (ii) six months of trailing cash burn net of outstanding borrowings under the loan agreement. The Company has at all times been in compliance with this covenant during the term of the agreement.

At December 31, 2009, the current and long-term amounts due under the loan agreement were \$1.3 million and \$2.3 million, respectively. The carrying amount of the Company's borrowings approximates fair value at December 31, 2009.

The remaining future minimum payments due as of December 31, 2009 are as follows (in thousands):

Years ending December 31:		
2010	\$	1,514
2011		1,400
2012		1,080
2013		3,994
Less payments for interest		(445)
Total principal obligation		3,549
Less short-term portion		(1,253)
Long-term portion	\$	2,296

**Table of Contents**

**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

**13. Restructuring Charges**

In October 2009, the Company announced a work-force reduction of approximately 20 percent, or 26 employees, as a part of a corporate restructuring, with reductions occurring across all levels and organizations within the Company. This measure was intended to reduce costs and to align the Company's resources with its key strategic priorities. The Company recorded restructuring charges of \$0.9 million during the fourth quarter of 2009 for employment termination costs payable in cash in connection with the workforce reduction. At December 31, 2009, \$0.3 million of the restructuring charges related to employment termination costs were unpaid and classified under accrued expenses on the balance sheet.

In December 2009, the Company initiated and completed a facilities consolidation effort, closing one of its subleased locations in Cranbury, NJ. The Company recorded a charge of \$0.7 million during the fourth quarter of 2009 for minimum lease payments of \$0.5 million and the write-down of fixed assets in the facility.

The following table summarizes the restructuring charges and utilization for the year ended December 31, 2009 (in thousands):

	<b>Balance as of December 31, 2008</b>	<b>Charges</b>	<b>Cash Payments</b>	<b>Adjustments</b>	<b>Balance as of December 31, 2009</b>
Employment termination costs	\$	\$ 868	\$ (597)	\$	\$ 271
Facilities consolidation		654			654
Total	\$	\$ 1,522	\$ (597)	\$	\$ 925

**14. Selected Quarterly Financial Data** (Unaudited in thousands except per share data)

	<b>Quarters Ended</b>			
	<b>March 31</b>	<b>June 30</b>	<b>September 30</b>	<b>December 31</b>
<b>2008</b>				
Net loss	\$ (7,731)	\$ (9,294)	\$ (8,180)	\$ (14,150)
Basic and diluted net loss per common share (1)	(0.34)	(0.41)	(0.36)	(0.63)
<b>2009</b>				
Net (loss)/income (2)	(12,472)	(13,623)	(13,429)	32,956
Basic net (loss)/income per common share (1)	(0.55)	(0.60)	(0.59)	1.46
Diluted net (loss)/income per common share (1)	(0.55)	(0.60)	(0.59)	1.45

(1) Per common share amounts for the quarters and full years have been calculated separately. Accordingly,



quarterly amounts do not add to the annual amounts because of differences on the weighted-average common shares outstanding during each period principally due to the effect of the Company's issuing shares of its common stock during the year.

- (2) Net income for the quarter ended December 31, 2009 was primarily due to the termination of the collaboration agreement with Shire and the resulting recognition of the balance of deferred revenue of \$44.7 million.

**Table of Contents**

**Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.**

None.

**Item 9A. CONTROLS AND PROCEDURES.**

**Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2009. The term disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2009, our principal executive officer and principal financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

There have been no changes in our internal controls over financial reporting during the fourth quarter of the year ended December 31, 2009 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

**Management's Report on Internal Control Over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with U.S. generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2009, using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Management's assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of those controls. Based on this evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2009. The effectiveness of our internal control over financial reporting as of December 31, 2009 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in its attestation report which is included in Item 8 of this Annual Report on Form 10-K under the caption Report of Independent Registered Accounting Firm.

**Item 9B. OTHER INFORMATION.**

None.

**Table of Contents****PART III**

Certain information required by Part III is omitted from this Annual Report on Form 10-K as we intend to file our definitive proxy statement for our 2009 annual meeting of stockholders, pursuant to Regulation 14A of the Securities Exchange Act, not later than 120 days after the end of the fiscal year covered by this Annual Report of Form 10-K, and certain information to be included in the proxy statement is incorporated herein by reference.

**Item 10. DIRECTORS, EXECUTIVE OFFICERS OF THE REGISTRANT AND CORPORATE GOVERNANCE.****Executive Officers**

The following table sets forth certain information regarding our current executive officers as of February 1, 2010.

*John F. Crowley* has served as Chairman, President and Chief Executive Officer since February 2010 and President and Chief Executive Officer since January 2005, and has also served as a Director of Amicus since August 2004, with the exception of the period from September 2006 to March 2007 when he was not an officer or director of Amicus while he was in active duty service in the United States Navy (Reserve). He was President and Chief Executive Officer of Orexigen Therapeutics, Inc. from September 2003 to December 2004. Mr. Crowley was President and Chief Executive Officer of Novazyme Pharmaceuticals, Inc., from March 2000 until that company was acquired by Genzyme Corporation in September 2001; thereafter he served as Senior Vice President of Genzyme Therapeutics until December 2002. Mr. Crowley received a B.S. degree in Foreign Service from Georgetown University's School of Foreign Service, a J.D. from the University of Notre Dame Law School, and an M.B.A. from Harvard Business School.

*Matthew R. Patterson* has served as Chief Operating Officer since September 2006. From December 2004 to September 2006 he served as Chief Business Officer. From 1998-2004, Mr. Patterson worked at BioMarin Pharmaceutical Inc. where he was Vice President, Regulatory and Government Affairs from 2001 to 2003 and later Vice President, Commercial Planning from 2003-2004. From 1993-1998, Mr. Patterson worked at Genzyme Corporation in Regulatory Affairs and Manufacturing. Mr. Patterson received a B.A. in Biochemistry from Bowdoin College.

*David J. Lockhart*, Ph.D., has served as Chief Scientific Officer since January 2006. Prior to joining Amicus, Dr. Lockhart served as President, Chief Scientific Officer and co-founder of Ambit Biosciences, a biotechnology company specializing in small molecule kinase inhibitors, from March 2001 to July 2005. Dr. Lockhart served as a consultant to Ambit Biosciences from August 2000 to March 2001, and as a visiting scholar at the Salk Institute for Biological Studies from October 2000 to March 2001. Prior to that, Dr. Lockhart served in various positions, including Vice President of Genomics Research at Affymetrix, and was the Director of Genomics at the Genomics Institute of the Novartis Research Foundation from February 1999 to July 2000. He received his Ph.D. from Stanford University and was a post-doctoral fellow at the Whitehead Institute for Biomedical Research at the Massachusetts Institute of Technology.

*S. Nicole Schaeffer* has served as Senior Vice President, Human Resources and Leadership Development since August 2008, and, prior thereto, as Vice President, Human Resources and Leadership Development since March 2005. From 2001 to 2004, she served as Senior Director, Human Resources, for three portfolio companies of Flagship Ventures, a venture capital firm, and in that capacity she managed human resources for three life sciences companies. Ms. Schaeffer received her B.A. from the University of Rochester and her M.B.A. from Boston University.

*Bradley L. Campbell* has served as Senior Vice President, Business Operations since January 2010. From May 2007 to January 2010, he served as Vice President, Business Planning and from April 2006 until May 2007, he served as Senior Director, Business Development. From 2002 until 2006, Mr. Campbell served as Senior Product Manager and later Business Director of CV Gene Therapy at Genzyme Corporation. Mr. Campbell received his B.A. from Duke University and his M.B.A. from Harvard Business School.

*John R. Kirk* has served as Vice President, Regulatory Affairs since January 1, 2008. Prior to joining Amicus, Mr. Kirk served as Executive Director, Regulatory Affairs at Aegerion Pharmaceuticals. From 2003 to 2007, Mr. Kirk held positions of increasing responsibility with Esperion Therapeutics which was acquired during this time by Pfizer. From 2000 to 2002, Mr. Kirk was Director, Worldwide Regulatory Affairs for Pfizer Global Research and Development. From 1988 to 2000, Mr. Kirk held various Regulatory positions with Parke-Davis Pharmaceutical

Research. Mr. Kirk holds both his M.S. and B.S. from Wright State University in Ohio.

*Geoffrey P. Gilmore* has served as Senior Vice President, General Counsel and Secretary since March 2008. Prior to joining Amicus, from 2003 to 2008, Mr. Gilmore was in the Law Department at Bristol-Myers Squibb Company, where most recently he served as Vice President and Senior Counsel. From 2002 to 2003, Mr. Gilmore was a Senior Attorney at Wyeth Pharmaceuticals. From 1997 to 2002, Mr. Gilmore held various positions in the law department of Bristol Myers Squibb Company. Prior to joining Bristol-Myers Squibb Company, Mr. Gilmore was an associate with the law firms, Ballard Spahr Andrews & Ingersoll, LLP, where he practiced in the Business and Finance Group, and Montgomery, McCracken, Walker & Rhoads, LLP, where he practiced in the Corporate & Securities Group. Mr. Gilmore received his B.A. from Franklin and Marshall College, and his J.D. from University of Michigan Law School.

**Table of Contents**

*Pol F. Boudes*, M.D., has served as Chief Medical Officer since January 2009. Prior to joining Amicus, from 2004 to 2009, Dr. Boudes served as Vice President, Global Clinical Development Women's Health Care US at Bayer HealthCare Pharmaceuticals (formerly Berlex, Inc.). From 1990 to 2004, Dr. Boudes served in positions of increasing responsibility with the Wyeth-Ayerst Research division of Wyeth both in Philadelphia, PA and in Europe, with Hoffmann-La Roche, and with Pasteur Merieux serums & vaccines (now sanofi-aventis). Dr. Boudes received his M.D. from the University of Aix-Marseilles, France, completed his internship and residency in Marseilles and in Paris, France and was an Assistant Professor of Medicine at the University of Paris. Dr. Boudes is specialized in Endocrinology and Metabolic Diseases, Internal Medicine, and Geriatric diseases. Dr. Boudes practiced medicine in this capacity in academic hospitals in France where he also participated in multiple clinical research programs as an investigator.

*John M. McAdam* has served as Vice President, Finance and Accounting since January 2010 and has also served as Corporate Controller, Principal Financial and Accounting Officer and Treasurer since October 2009. From April 2007 to January 2010, he served as Senior Director of Finance and Accounting and Corporate Controller. From March 2006 to April 2007, he served as Director of Finance and Accounting and Corporate Controller and from March 2006 to September 2006 as the Company's Interim Principal Financial and Accounting Officer. From 2001 to 2006, Mr. McAdam worked at Quest Diagnostics Incorporated where he served in a variety of financial positions, most recently as Director of Accounting and Reporting. Prior to that, Mr. McAdam served as an audit professional at KPMG LLP. Mr. McAdam is a certified public accountant and received his B.S. in Accountancy from Villanova University and his M.B.A. from Rutgers Business School.

The other information required by this item is incorporated by reference from the definitive proxy statement which Amicus will file with the Securities and Exchange Commission no later than 120 days after December 31, 2009 (the Proxy Statement), under the captions Election of Directors and Section 16(a) Beneficial Ownership Reporting Compliance.

In 2007, we adopted a Code of Business Ethics and Conduct for Employees, Executive Officers and Directors that applies to our employees, officers and directors and incorporate guidelines designed to deter wrongdoing and to promote the honest and ethical conduct and compliance with applicable laws and regulations. In addition, the code of ethics incorporates our guidelines pertaining to topics such as conflicts of interest and workplace behavior. We have posted the text of our code on our website at [www.amicustherapeutics.com](http://www.amicustherapeutics.com) in connection with Investors/Corporate Governance materials. In addition, we intend to promptly disclose (1) the nature of any amendment to our code of ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and (2) the nature of any waiver, including an implicit waiver, from provision of our code of ethics that is granted to one of these specified officers, the name of such person who is granted the waiver and the date the waiver on our website in the future.

**Item 11. EXECUTIVE COMPENSATION.**

The information required by this item is incorporated by reference from the Proxy Statement under the caption Executive Compensation Compensation Discussion and Analysis.

**Table of Contents**

**Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.**

The information required by this item is incorporated by reference from the Proxy Statement under the captions Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters and Equity Compensation Plan Information.

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE.**

The information required by this item is incorporated by reference from the Proxy Statement under the captions Certain Relationships and Related Transactions, Director Independence, Committee Compensation and Meetings of the Board of Directors, and Compensation Committee Interlock and Insider Participation.

**Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.**

The information required by this item is incorporated by reference from the Proxy Statement under the caption Ratification of Independent Registered Public Accounting Firm.

**Table of Contents****PART IV****Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULE***(a) 1. Consolidated Financial Statements*

The Consolidated Financial Statements are filed as part of this report.

*2. Consolidated Financial Statement Schedules*

All schedules are omitted because they are not required or because the required information is included in the Consolidated Financial Statements or notes thereto.

*3. Exhibits*

Exhibit No.	Filed Exhibit Description	Incorporated by Reference to SEC Filing			Filed with this Form 10-K
		Form	Date	Exhibit No.	
3.1	Restated Certificate of Incorporation of the Registrant.	S-1 (333-141700)	5/17/07	3.2	
3.2	Restated By-laws of the Registrant.	S-1/A (333-141700)	4/27/07	3.4	
4.1	Specimen Stock Certificate evidencing shares of common stock	S-1 (333-141700)	3/30/07	4.1	
4.2	Third Amended and Restated Investor Rights Agreement, dated as of September 13, 2006, as amended	S-1 (333-141700)	3/30/07	4.3	
4.3	Form of Warrant	Form 8-K	2/25/10	4.1	
10.1	2002 Equity Incentive Plan, as amended, and forms of option agreements thereunder	S-1/A (333-141700)	4/27/07	10.1	
+ 10.2	Amended and Restated License Agreement, dated October, 31, 2008, by and between the Registrant and Mount Sinai School of Medicine of New York University	Form 10-K	2/6/09	10.3	
+ 10.3	License Agreement, dated as of June 26, 2003, by and between the Registrant and University of Maryland, Baltimore County, as amended	S-1 (333-141700)	3/30/07	10.4	
+ 10.4	Exclusive License Agreement, dated as of June 8, 2005, by and between the Registrant and Novo Nordisk, A/S	S-1 (333-141700)	3/30/07	10.5	
10.5	Sublease Agreement, dated as of May 12, 2005, by and between the Registrant and Purdue Pharma, L.P.	S-1 (333-141700)	3/30/07	10.6	
10.6	Amended and Restated Employment Agreement, dated as of December 30, 2008, by and between the Registrant and John F. Crowley	Form 8-K Current Report	12/31/08	10.1	
10.7	Letter Agreement, dated as of November 9, 2004, by and between the Registrant and Matthew R. Patterson	S-1 (333-141700)	3/30/07	10.8	

Edgar Filing: AMICUS THERAPEUTICS INC - Form 10-K

10.8	Letter Agreement, dated as of December 19, 2005, by and between the Registrant and David Lockhart, Ph.D.	S-1 (333-141700)	3/30/07	10.10
10.9	Form of Director and Officer Indemnification Agreement	S-1 (333-141700)	3/30/07	10.17
10.10	Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and James E. Dentzer	S-1/A (333-141700)	4/27/07	10.20
10.11	Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and Glenn P. Sblendorio	S-1/A (333-141700)	4/27/07	10.21
10.12	Lease Agreement, dated as of July 31, 2006, by and between the Registrant and Cedar Brook II Corporate Center, L.P.	S-1/A (333-141700)	4/27/07	10.22
10.13	2007 Director Option Plan and form of option agreement	S-1/A (333-141700)	5/17/07	10.23
10.14	2007 Employee Stock Purchase Plan	S-1/A (333-141700)	5/17/07	10.24
10.15	Amicus Therapeutics, Inc. 2007 Amended and Restated Equity Incentive Plan	Form 8-K Current Report	6/12/08	10.1



**Table of Contents**

<b>Exhibit</b>	<b>Filed Exhibit Description</b>	<b>Incorporated by Reference to SEC</b>			<b>Filed with this</b>
		<b>Form</b>	<b>Filing Date</b>	<b>Exhibit No.</b>	
10 .16	Lease Agreement dated as of September 11, 2008 by and between the Registrant and A/G Touchstone, TP, LLC.	Form 8-K Current Report	9/15/08	10.1	<b>Form 10-K</b>
+ 10.17	License and Collaboration Agreement, dated as of November 7, 2007, by and between the Registrant and Shire Pharmaceuticals Ireland, Ltd.	Form 10-K Annual Report	2/08/08	10.20	
10 .18	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and David Lockhart, Ph.D.	Form 8-K Current Report	12/31/08	10.4	
10 .19	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Matthew R. Patterson	Form 8-K Current Report	12/31/08	10.3	
10.20	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Bradley L. Campbell	Form 10-K	2/6/09	10.26	
10 .21	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and S. Nicole Schaeffer	Form 10-K	2/6/09	10.28	
10 .22	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and John R. Kirk	Form 10-K	2/6/09	10.29	
10.23	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Geoffrey P. Gilmore	Form 10-K	2/6/09	10.31	
10 .24	Summary Management Bonus Program	Form 10-Q	5/8/09	10.1	
10.25	First Amendment to Lease Agreement dated June 11, 2009 between the Registrant and Cedar Brook 5 Corporate Center, L.P.	Form 10-Q	8/6/09	10.1	
10 .26	Mutual Termination Agreement dated as of October 29, 2009 between Amicus Therapeutics, Inc. and Shire Pharmaceuticals Ireland Ltd.	Form 8-K	10/29/09	10.1	
10 .27	Placement Agency Agreement dated February 25, 2010 between Amicus Therapeutics, Inc. and Leerink Swann LLC	Form 8-K	2/25/10	10.2	
10 .28	Form of Subscription Agreement	Form 8-K	2/25/10	10.1	
10 .29		Form 8-K	3/4/10	10.1	

Letter Agreement, dated as of March 2, 2009, by and between the Registrant and John M. McAdam

23.1	Consent of Independent Registered Public Accounting Firm.	X
31 .1	Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934.	X
31 .2	Certification of Principal Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934.	X
32 .1	Certificate of Principal Executive Officer pursuant to 18 U.S.C. Section 1350 and Section 906 of the Sarbanes-Oxley Act of 2002.	X
32 .2	Certificate of Principal Financial Officer pursuant to 18 U.S.C. Section 1350 and Section 906 of the Sarbanes-Oxley Act of 2002.	X
+	Confidential treated has been granted as to certain portions of the document, which portions have been omitted and filed separately with the Securities and Exchange Commission.	

**Table of Contents****SIGNATURES**

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on March 10, 2010.

AMICUS THERAPEUTICS, INC.  
(Registrant)

By: /s/ John F. Crowley  
John F. Crowley  
*Chief Executive Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/ John F. Crowley  (John F. Crowley)	Chairman, President and Chief Executive Officer (Principal Executive Officer)	March 10, 2010
/s/ John M. McAdam  (John M. McAdam)	Vice President, Finance & Accounting (Principal Financial and Accounting Officer)	March 10, 2010
/s/ Donald J. Hayden  (Donald J. Hayden)	Director	March 10, 2010
/s/ Sol J. Barer, Ph.D.  (Sol J. Barer, Ph.D.)	Director	March 10, 2010
/s/ Alexander E. Barkas, Ph.D.  (Alexander E. Barkas, Ph.D.)	Director	March 10, 2010
/s/ James Barrett, Ph.D.  (James Barrett, Ph.D.)	Director	March 10, 2010
/s/ Margaret G. McGlynn, R.Ph.  (Margaret G. McGlynn, R.Ph.)	Director	March 10, 2010
/s/ P. Sherrill Neff  (P. Sherrill Neff)	Director	March 10, 2010
/s/ Michael G. Raab  (Michael G. Raab)	Director	March 10, 2010



**Table of Contents**

<b>Exhibit No.</b>	<b>Filed Exhibit Description</b>	<b>Incorporated by Form</b>	<b>Reference to SEC Filing Date</b>	<b>SEC Filing Exhibit No.</b>	<b>Filed with this Form 10-K</b>
3 .1	Restated Certificate of Incorporation of the Registrant.	S-1 (333-141700)	5/17/07	3.2	
3 .2	Restated By-laws of the Registrant.	S-1/A (333-141700)	4/27/07	3.4	
4 .1	Specimen Stock Certificate evidencing shares of common stock	S-1 (333-141700)	3/30/07	4.1	
4 .2	Third Amended and Restated Investor Rights Agreement, dated as of September 13, 2006, as amended	S-1 (333-141700)	3/30/07	4.3	
4 .3	Form of Warrant	Form 8-K	2/25/10	4.1	
10 .1	2002 Equity Incentive Plan, as amended, and forms of option agreements thereunder	S-1/A (333-141700)	4/27/07	10.1	
+ 10 .2	Amended and Restated License Agreement, dated October, 31, 2008, by and between the Registrant and Mount Sinai School of Medicine of New York University	Form 10-K	2/6/09	10.3	
+ 10 .3	License Agreement, dated as of June 26, 2003, by and between the Registrant and University of Maryland, Baltimore County, as amended	S-1 (333-141700)	3/30/07	10.4	
+ 10 .4	Exclusive License Agreement, dated as of June 8, 2005, by and between the Registrant and Novo Nordisk, A/S	S-1 (333-141700)	3/30/07	10.5	
10 .5	Sublease Agreement, dated as of May 12, 2005, by and between the Registrant and Purdue Pharma, L.P.	S-1 (333-141700)	3/30/07	10.6	
10 .6	Amended and Restated Employment Agreement, dated as of December 30, 2008, by and between the Registrant and John F. Crowley	Form 8-K Current Report	12/31/08	10.1	
10 .7	Letter Agreement, dated as of November 9, 2004, by and between the Registrant and Matthew R. Patterson	S-1 (333-141700)	3/30/07	10.8	
10 .8	Letter Agreement, dated as of December 19, 2005, by and between the Registrant and David Lockhart, Ph.D.	S-1 (333-141700)	3/30/07	10.10	
10 .9	Form of Director and Officer Indemnification Agreement	S-1 (333-141700)	3/30/07	10.17	
10 .10	Restricted Stock Agreement, dated as of March 8, 2007, by and between the	S-1/A (333-141700)	4/27/07	10.20	

Edgar Filing: AMICUS THERAPEUTICS INC - Form 10-K

10 .11	Registrant and James E. Dentzer Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and Glenn P. Sblendorio	S-1/A (333-141700)	4/27/07	10.21
10 .12	Lease Agreement, dated as of July 31, 2006, by and between the Registrant and Cedar Brook II Corporate Center, L.P.	S-1/A (333-141700)	4/27/07	10.22
10 .13	2007 Director Option Plan and form of option agreement	S-1/A (333-141700)	5/17/07	10.23
10 .14	2007 Employee Stock Purchase Plan	S-1/A (333-141700)	5/17/07	10.24
10 .15	Amicus Therapeutics, Inc. 2007 Amended and Restated Equity Incentive Plan	Form 8-K Current Report	6/12/08	10.1
10 .16	Lease Agreement dated as of September 11, 2008 by and between the Registrant and A/G Touchstone, TP, LLC.	Form 8-K Current Report	9/15/08	10.1
+ 10 .17	License and Collaboration Agreement, dated as of November 7, 2007, by and between the Registrant and Shire Pharmaceuticals Ireland, Ltd.	Form 10-K Annual Report	2/08/08	10.20
10 .18	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and David Lockhart, Ph.D.	Form 8-K Current Report	12/31/08	10.4

**Table of Contents**

<b>Exhibit No.</b>	<b>Filed Exhibit Description</b>	<b>Incorporated by Form</b>	<b>Reference to SEC Filing Date</b>	<b>SEC Filing Exhibit No.</b>	<b>Filed with this Form 10-K</b>
10 .19	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Matthew R. Patterson	Form 8-K Current Report	12/31/08	10.3	
10 .20	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Bradley L. Campbell	Form 10-K	2/6/09	10.26	
10 .21	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and S. Nicole Schaeffer	Form 10-K	2/6/09	10.28	
10 .22	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and John R. Kirk	Form 10-K	2/6/09	10.29	
10 .23	Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Geoffrey P. Gilmore	Form 10-K	2/6/09	10.31	
10 .24	Summary Management Bonus Program	Form 10-Q	5/8/09	10.1	
10 .25	First Amendment to Lease Agreement dated June 11, 2009 between the Registrant and Cedar Brook 5 Corporate Center, L.P.	Form 10-Q	8/6/09	10.1	
10 .26	Mutual Termination Agreement dated as of October 29, 2009 between Amicus Therapeutics, Inc. and Shire Pharmaceuticals Ireland Ltd.	Form 8-K	10/29/09	10.1	
10 .27	Placement Agency Agreement dated February 25, 2010 between Amicus Therapeutics, Inc. and Leerink Swann LLC	Form 8-K	2/25/10	10.2	
10 .28	Form of Subscription Agreement	Form 8-K	2/25/10	10.1	
10 .29	Letter Agreement, dated as of March 2, 2010, by and between the Registrant and John M. McAdam	Form 8-K	3/4/10	10.1	
23 .1	Consent of Independent Registered Public Accounting Firm.				X
31 .1	Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934.				X
31 .2	Certification of Principal Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934.				X

32 .1	Certificate of Principal Executive Officer pursuant to 18 U.S.C. Section 1350 and Section 906 of the Sarbanes-Oxley Act of 2002.	X
32 .2	Certificate of Principal Financial Officer pursuant to 18 U.S.C. Section 1350 and Section 906 of the Sarbanes-Oxley Act of 2002.	X
+	Confidential treated has been granted as to certain portions of the document, which portions have been omitted and filed separately with the Securities and Exchange Commission.	